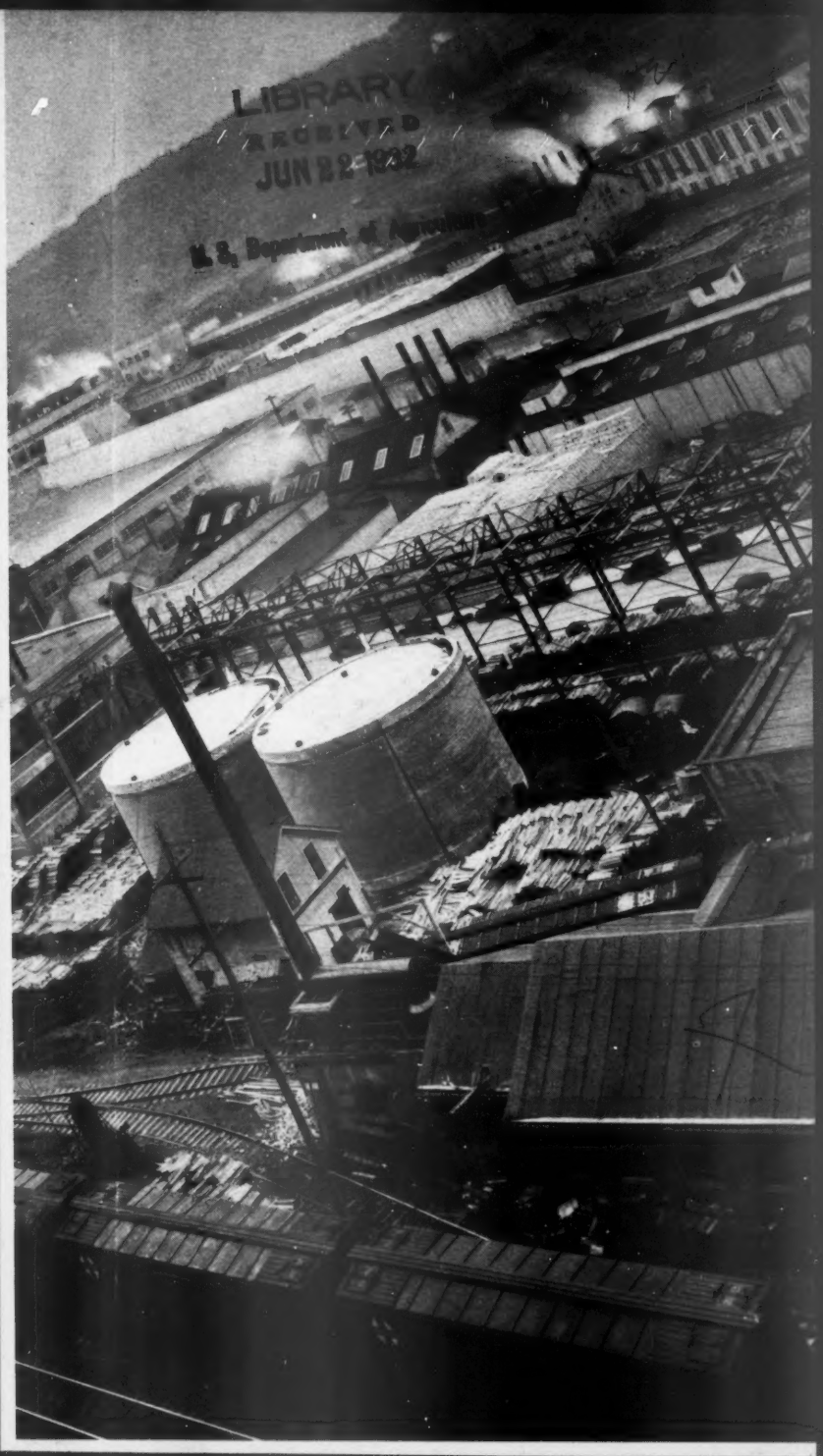
PACIFIC PULP & PAPER INDUSTRY

JUNE
1932



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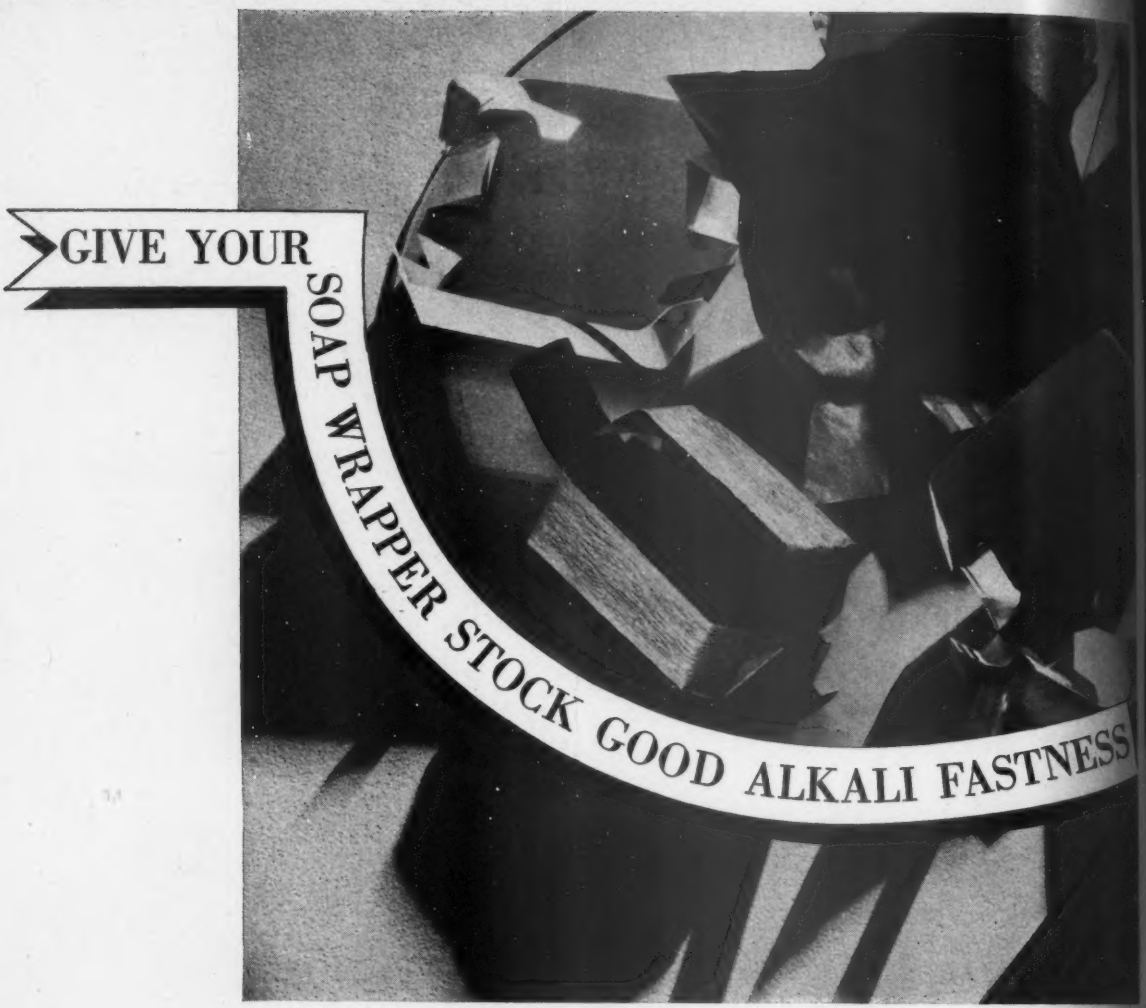

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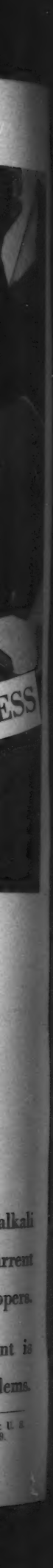

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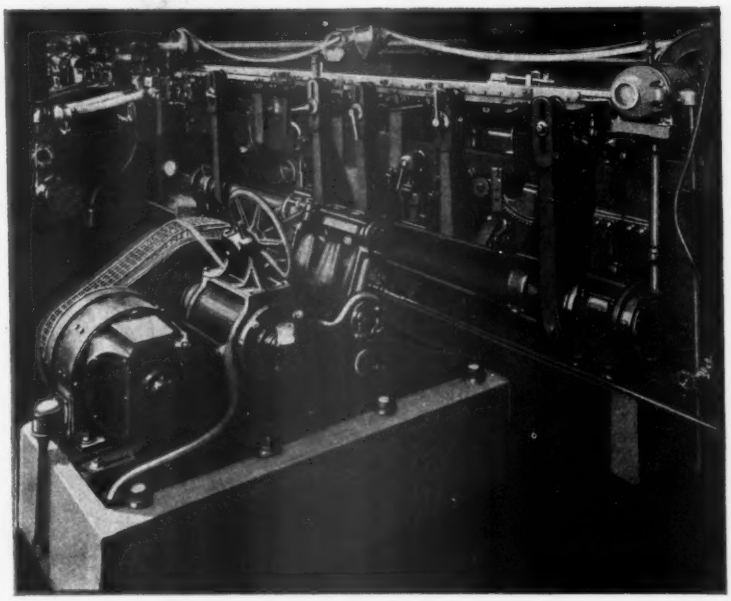

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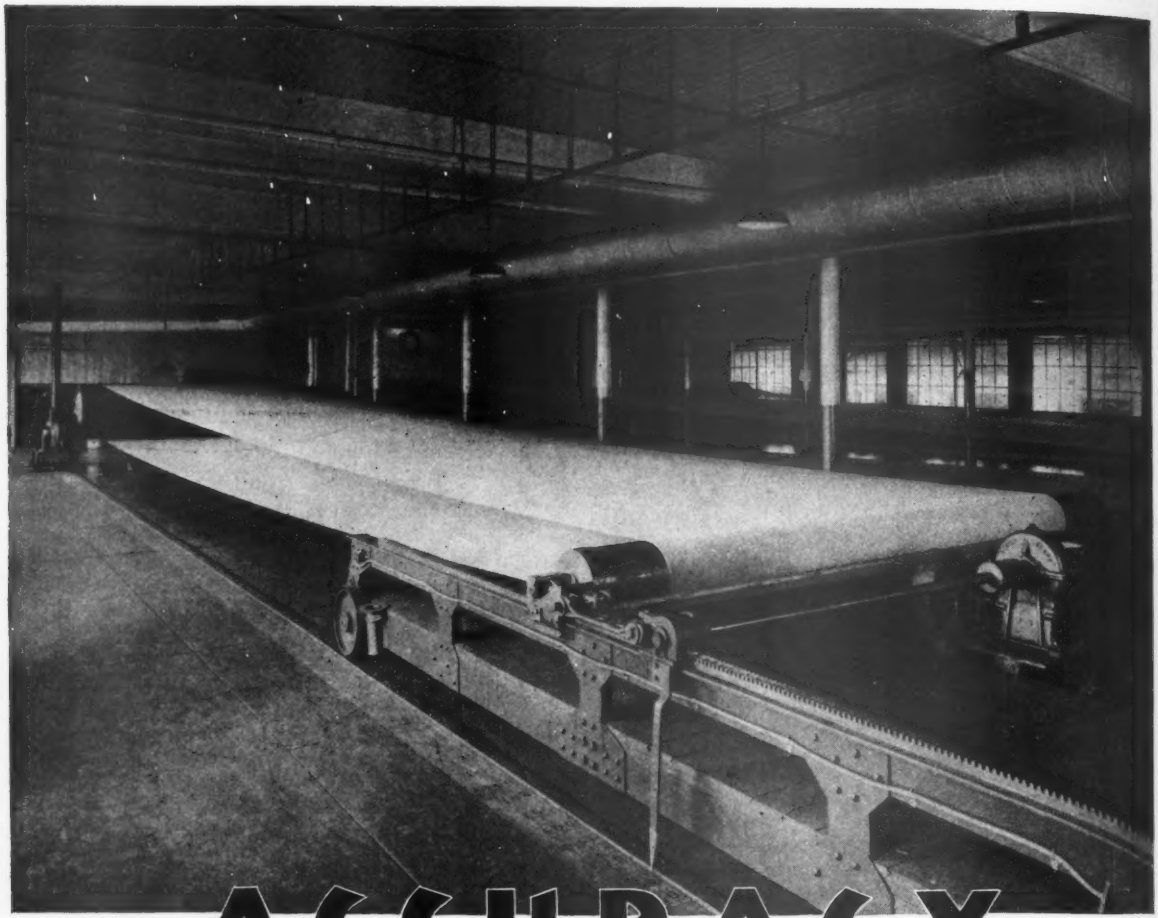

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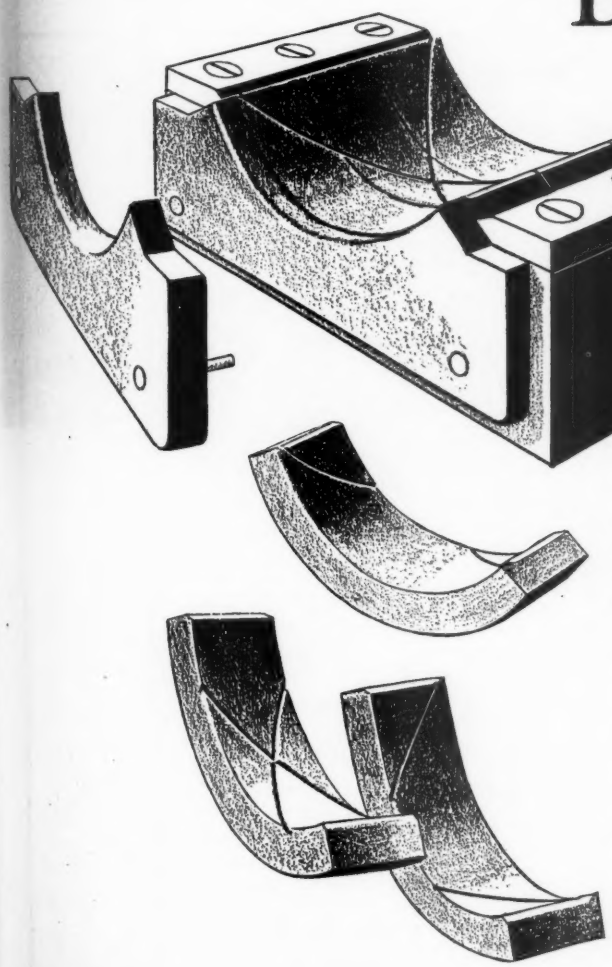

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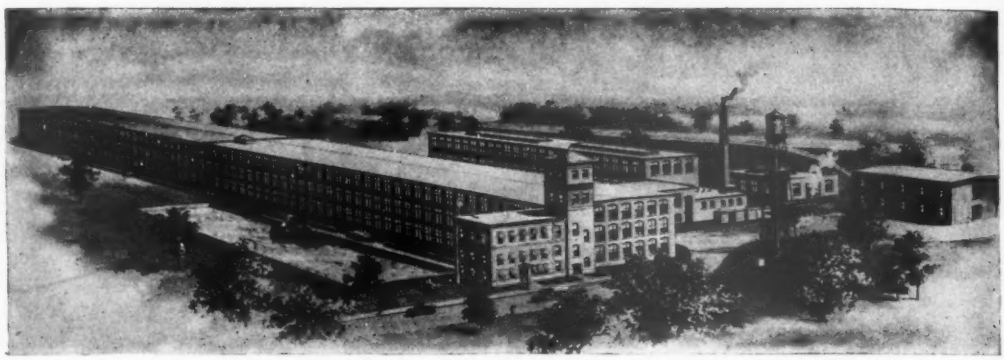

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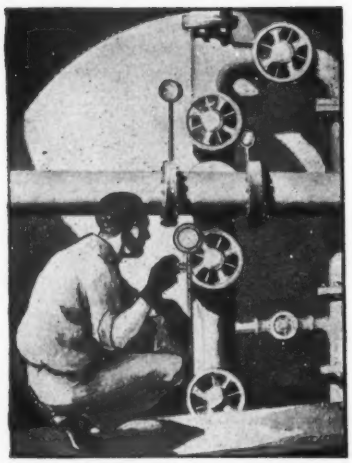
THE BACKGROUND OF PULP AND PAPER

Every pulp and paper mill man who looks beyond the chipper and pulpwood pile, finds a most important field of vision. Forests, lumber, these form the background of pulp and paper.

Keeping apace of developments in the lumbering field, as directly affecting your business, is well worth while. This can best be done by reading the leading lumber journal, West Coast Lumberman, each month. Subscription, $3.50 per year, including the Annual Review. Foreign, $4.00.

WEST COAST LUMBERMAN
71 Columbia St. Seattle, Wash.



APPLICATION OF CHLORAMINES IN WHITE WATER

CONTROL and elimination of slime in the white water system is vital, because conditions there are ideal for the growth of slime bacteria. The water is constantly recirculated through the system, and is kept at a relatively high temperature. The result is that white water storage tanks and other equipment are frequently heavily coated with slime which decomposes the stock and consequently gives off offensive odors.

Chloramines are highly effective in treating slime in the white water system. Experimentation has indicated that restricted application to the raw water supply, with relatively heavy dosage in the white water, is the most desirable method of application. It is more economical, gives greater assurance of eliminating the slime throughout the whole system, and prevents the decomposition of stock with the usual accompaniments: discoloration, disagreeable odor, etc.

Application may be made either in the fan pump, the head box, or stuff chest. Even large dosages of chloramines, sometimes necessary to cope with heavy coatings of slime, will not injure the stock in the water. They have distinct advantages over chlorine alone because of their low oxidation potential and consequent longer effectiveness.

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NOW IS NO TIME TO LAY DOWN

FAILURE of Congress to enact legislation that would equalize the unfair competitive advantage that has been imposed upon the domestic pulp producers by reason of depreciated exchange in those nations supplying the principal exports of wood pulp to the United States dealt a severe blow to the domestic pulp producers. Despite a strong fight, one that continued up to the very adjournment, the cause was lost. BUT, notwithstanding defeat in the present instance, the case is far from closed. The first skirmish has been lost, but the fight has just started. NOW IS NO TIME FOR THE DOMESTIC PULP INDUSTRY TO LAY DOWN.

The major engagement was fought in the hearings before the Committee on Ways and Means of the House of Representatives on May 12 to 18. A review of those proceedings indicates that pulp was a big item of discussion, which was natural to expect since the commodity in volume and value represents one of the most important imports competing with domestic produce. The opposition was well organized but is entitled to open criticism for a rather free use of misleading statements and for adherence to economic saws some twenty years out of date.

With particular respect to pulp, the opposition repeatedly attempted to fog the issue by implying that the legislation was sought mainly to relieve pulp mills in the Pacific Northwest and was therefore only a regional proposition. Such implication could not stray farther from the truth. This is a national proposition, if there ever was one. While it is true that the pulp mills in the Pacific Northwest took an aggressive part in seeking the legislation, they were well supported by domestic pulp producers in many other parts of the country, namely Maine, Wisconsin, Michigan, North Carolina, Florida, and elsewhere, as well as by many other industries.

A great deal of credit is due in particular to Congressmen Hill and Hadley of Washington, and Hawley of Oregon, for carrying on the fight and for asking searching questions. However, this is not to imply that they alone did all the work, for a number of other Congressmen, such as Beedy, Nelson and Snow of Maine, Pittinger of Minnesota, Wolcott of Michigan, and Horr of Washington, personally appeared and testified favorably. In addition there were a number of members of the committee who were strongly favorable.

Some very strong statements were presented by a number of the pulp and paper mill executives who appeared in person, while in total an abundance of permanently valuable information was carried into the records in the form of briefs, letters, and other data filed.

At the time the hearings were being held the Chamber of Commerce of the United States was holding its annual session in San Francisco. A determined effort was made there to get the Chamber to adopt a resolution favoring passage of the Hawley Bill (8688) or equivalent legislation. Ossian Anderson, president of the Puget Sound Pulp & Timber Company, was a leader in this move, assisted by George W. Houk, executive vice president of the Hawley Pulp & Paper Company, and Frank McLaughlin, president of the Puget Sound Power & Light Company. The latter took an exceptionally active part.

The National Chamber referred the resolution to the board of directors with favorable comment "concurring in the previously expressed opinion" of the organization. This referred to a letter written on May 3 by Silas H. Strawn, president of the Chamber of Commerce of the United States, to Acting Chairman Crisp of the House Ways and Means Committee, in which he said in part:

. . . "may I urge upon your committee consideration of the present situation and that you recommend to the Congress such action as will meet the conditions caused by the depreciated currencies of other nations."

J. M. Conway, president and general manager of the Hoberg Paper & Fibre Company, Green Bay, Wisconsin, submitted a strong brief supported by Wisconsin pulp mills having a total annual capacity of 477,000 tons. This brief, in addition to showing specific effects of depreciated currency competition, set forth some valuable information on the other businesses dependent to large degree for revenue on the pulp industry.

The brief at one point stated:

"The economic fallacy of the policy of the 'converting mills' is obvious when it is realized that coincident with the death knell of the domestic sulphite pulp industry all domestic paper mills will be entirely dependent upon foreign sources of supply for sulphite pulp. If and when that time arrives, the foreigners will be able to dictate their own prices. And they will not be low prices."

Stuart B Copeland, vice president and general manager of the Eastern Manufacturing Company of Maine, representing a number of other mills besides his own, said that:

. . . "legislation affecting the imports from countries of depreciated currencies is not only necessary to the return of normal conditions of business but is absolutely vital to the very continuance of some of our principal industries."

Mr. Copeland, in the brief which he filed, rapped the propaganda issued by "The Temporary Committee Opposing Tariff on Wood Pulp" as "inaccurate, distorted, and misleading." He also brought out the significant point that:

. . . "the paper manufacturers favoring enactment of measures to equalize depreciated currencies produce 57% of all the paper made in the United States and about 70% of the wood-pulp papers made in the United States."

Walter V. Wentworth, manager of the Penobscot Chemical Fibre Company of Maine submitted a brief, in which appeared these statements which are significant:

"Our workingmen have been very patient, but there is a limit. They want work—not charity—and they will increasingly demand that their jobs shall not be stolen by men overseas."

"Look at the names of the temporary committee opposing a tariff on wood pulp. You will see they are all protected by tariff on their finished products."

Congressman Ralph Horr of Washington in his appearance before the committee effectually introduced the fact that the emergency legislation to correct the evils of an influx of cheap foreign goods was not at all something new and novel as some Congressmen and some of the opposition tried to indicate. He produced translations from the French "Buletin Oficial" (which corresponds to our own Congressional Record) and showed how the French government, promptly after the flight from gold on the part of most of Europe, decreed special surtaxes in varying amounts against the imports of those nations whose currency had depreciated.

The brief submitted by E. W. Kiefer, president of the Port Huron Sulphite & Paper Company of Detroit, Michigan, ably pictured the broader aspects of the industry. This is quoted in part herewith:

"The United States makes 4,800,000 tons of pulp, uses 4,000,000 in the mills in which it is made into paper, sells 800,000 tons to other paper mills, and imports 2,000,000 tons.

"The condition which the Hawley Bill seeks to correct is to put the producers of the 4,800,000 tons of the United States pulp on a basis of equality with the buyers of the 2,000,000 tons bought abroad.

"The American pulp producer has to pay his labor and buy his wood from the American farmer with United States dollars . . . but he can not meet him (the foreigner) on a basis of 25% in his favor due to the foreigner's depreciated currency which allows the foreigner's pulp to be sold at least 25% lower than any time in history. This is unfair and destructive competition, particularly when it is being enjoyed by an industry protected with a 33% duty on paper.

"It is of course only a question of time if Congress does not correct this condition before all American pulp making which is not protected by any duty will cease and the $200,000,000 now spent annually for American pulp will go to the Scandinavians and the $100,000,000 of this sum now received by the American farmer can be made up by another farm relief fund provided by Congress."

Reuben B. Robertson, president of the Champion Fibre Company, Canton, North Carolina, in speaking ardently for the equalization measure said, "We look upon this measure as an unemployment measure, and an unemployment measure that is unique in that it does not constitute a drain on the Federal funds; that instead of constituting a drain it will actually bring in money from the foreigner who now shares our market with us without assuming any responsibility for the expenses of government."

In the brief filed by Mr. Robertson appeared this significant paragraph:

"The chemical pulp industry is one that not only must accept the burden of large permanent investment, but must also accept the burden of large inventory, almost always in the item of raw material, and frequently in the finished product. Wood purchases in many instances are necessarily made a year, sometimes two years, in advance of actual use. The industry can not, therefore, quickly adjust itself to sudden fluctuations without serious loss."

Further:

"It would be expecting too much to believe that any proposition of this sort could be presented to Congress without uncovering some dissenting interests. Naturally those dealers who are obtaining their livelihood by the distribution of these foreign pulps would be expected to make every effort to hold on to the advantage which has been given to them over American producers."

And also:

"As the pulp is on the free list not a single red penny of contribution toward our tax burden is made by the importer, but what should be and could be going toward the reduction of our Governmental expenses is actually serving only to swell the profits of the foreign producer, benefitted by the depreciation of his currency."

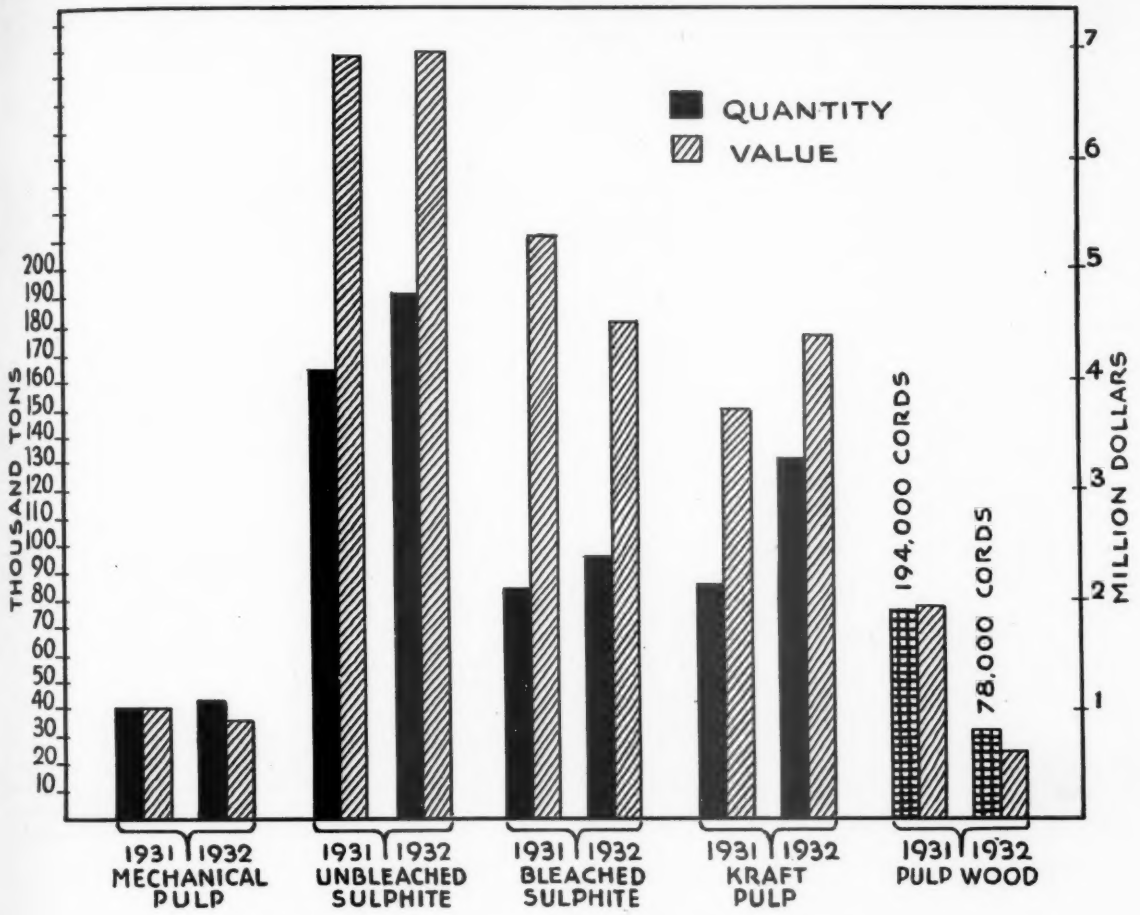
Ralph Shaffer, president of the Shaffer Box Company, Tacoma, Washington, was the only West Coast pulp mill executive to appear at the hearings. However, other West Coast men were heard, among them, Reno Odlin, former state commander for the department of Washington, American Legion; Capt H. Ramwell, towboat and cannery man from Everett, Washington; Col. W. B. Greeley, West Coast Lumbermen's Association; and Dr. E. D. Clark, of the Association of Pacific Fisheries.

As far as the pulp and paper industry is concerned, the hearings served at least to separate the sheep from the goats. The big point brought out by the proponents in the hearings was the preservation of American industries and American employment opportunities for American workmen, but this vital issue was submerged in perambulating discussion of details.

The end has not been heard. The effects of depreciated currency in demoralizing and destroying American industries has not yet run its course. Sterling exchange—and on that hangs the exchange of much of the world—can be purchased at its present depreciated value for many months ahead. That does not look like the evil is only a passing one. The American pulp mills have been running on their raw material inventories, on hope of legislative relief, and on pure nerve. Now the first has been nearly exhausted, the second has been denied, and the third has been goaded to greater lengths.

THE INDUSTRY AS A WHOLE CAN NEVER ENJOY A STABLE PROSPERITY AS LONG AS PROTECTION AGAINST THE LOWER STANDARDS OF FOREIGN COUNTRIES IS DENIED TO HALF OF IT. THE PRESENT DEFEAT IS BUT THE RALLYING CRY TO A RENEWED AND CONTINUING EFFORT THAT CAN NOT REST SHORT OF COMPLETE AND ADEQUATE PROTECTION FOR ALL PARTS OF THE PULP AND PAPER INDUSTRY FROM THE TREE TO THE TRADE.

NOW! ABOVE ALL TIMES, IS NO TIME TO LAY DOWN.



Imports Into the United States of Pulpwood and Principal Grades of Wood Pulp

Comparing first quarters of 1931 and 1932

The chart above illustrates in graphic way the demoralization of the pulp and pulpwood markets in the course of a year. Altho consumption and prices both had declined from the highs of 1928 and 1929 by the time the first quarter of 1931 was reached, the changes within the past twelve months have brought about an entirely different picture.

Mechanical pulp underwent comparatively little change. Consumption of foreign groundwood pulp increased in nominal amount, while at the same time the value per ton and the total value of imports of this grade decreased.

However, the greater competition has come in the sulphite group. The total value of unbleached sulphite pulp imported remained practically stationary despite the fact that the volume of imports increased very substantially. The same is true in large degree in the case of bleached sulphite, altho here the price deflation was much more severe.

The significant point in this respect is that the volume of foreign imported sulphite pulp should increase at a time when domestic production shows a falling off. Total consumption of paper in the United States has declined from 1931 to 1932 in sympathy with the widespread business depression. The interpretation is that the domestic producers of pulp, whether they make pulp for sale or for the manufacture of paper in their own plant, have had to absorb not only the lessened demand occasioned by decreased consumption, but they have had also to give up that part of the domestic market taken away from them as represented in the increased volume of foreign pulp imports.

The situation in kraft has been chaotic. Here, however, the effects came earlier. The kraft market was virtually at bottom at the beginning of 1931. The increase in imports here represents the domestic market taken away from American mills forced out of production.

IMPORTS OF WOOD PULP AND OTHER BASE STOCKS
(Comparing first quarters of 1931 and 1932)

	1931		1932	
	Quantity	Value	Quantity	Value
Pulpwoods ..... cords	194,301	1,929,877	78,233	636,857
Wood and other pulps—				
Mechanically ground:				
Unbleached ..... tons	37,692	969,823	40,558	835,842
Bleached ..... tons	2,221	55,097	2,045	44,311
Sulphite wood pulp—				
Unbleached ..... tons	154,381	6,898,672	190,495	6,994,994
Bleached ..... tons	84,420	5,217,975	94,658	4,583,022
Sulphate wood pulp—				
Unbleached ..... tons	71,236	2,918,525	124,492	3,871,527
Bleached ..... tons	12,598	783,450	6,383	553,490
Soda pulp ..... tons	1,003	54,093	826	35,543
Other pulp ..... tons	38	3,781	81	10,884
Rags for paper stock ... lbs.	27,734,537	392,887	23,066,076	318,696
All other paper stock ... lbs.	30,385,328	454,020	29,666,545	218,325
Total		$19,678,200		$18,103,401

Source—Commerce Reports, U. S. Dept. of Commerce.

FOREIGN TRADE vs.

Is it only a tin god before which we worship?

THE development of our foreign trade in the five years preceding this depression period was an important factor in our general prosperity. In 1929 our exports reached a total of $5,200,000,000 and our imports amounted to the slightly less impressive total of $4,400,000,000.

Following the economic collapse of 1929 both our imports and exports have been reduced perceptibly in value and volume. This has aroused a considerable discussion on ways and means for re-establishing the former high levels of our foreign trade, but it also suggests the thought that perhaps we have been blinded in consideration of certain basic facts due to our habits of attaching perhaps too high a value to rising curves and mass totals.

While I am in no way belittling the importance of foreign trade and the desirability of commercial intercourse between nations, I intend in this discussion to outline for your serious consideration domestic developments, some few of which are disconcerting, which go hand in hand with the question of foreign trade. I hope to point out that, desirable as expansion of foreign trade may seem to be, we have given much greater emphasis to the part this business plays in our national economy than is justified in any comparison of foreign trade totals with the total domestic business.

Perhaps we are at times to blame for forgetting that in our own 48 states we have the world's greatest free trade area, an area comprised of more than 120,000,000 people, possessed of the highest average purchasing power of any people anywhere. From reliable statistics we learn that of our total national business turnover, measured over a period of several years, our export trade represents only from 4% to 8% of the total business done. I am sure that we are all agreed that our first duty lies in religiously guarding the welfare of that market which provides us with from 92% to 96% of all the business we do.

In any consideration of foreign trade the subject of trade barriers immediately arises. These barriers may take the form of prohibitive tariffs, import quotas, and other more intangible forms such as the "Buy at Home" campaigns that we now see taking form in a number of nations. The British Empire affords us with an excellent example of the latter and at this very time is preparing to convene in Ottawa for an imperial trade conference which is specifically designed to increase trade between the far flung dominions under the British flag.

Repeatedly the United States has been blamed for developing a tariff policy that has developed in other nations retaliatory measures designed to exclude American produce and manufactures. Many are now convinced of the fallacy of this argument, which, I am sorry to say, the American press has helped to disseminate. There can be little question that anti-tariff propaganda has been foisted upon a public by interests which have stood directly to profit by any scaling down of protectionist measures, interests which probably were not concerned with national welfare first and individual welfare second. I am inclined to believe that a more reasonable interpretation of these so-called "retaliatory tariffs" may be discovered in the fact that the foreign nations applying them have witnessed the stimulation of trade within the United States upon the application of a protective policy, and having seen, are hoping to partake of the same wisdom. In the final analysis foreign trade is measured only by the length and breadth of the pocketbook. Others buy from us only because we can furnish better goods, better service, or lower prices. We buy on the same basis.

The many criticisms so generously accorded our present tariff legislation are in part justified. However, there is little else to expect in view of the political log-rolling conditions under which our tariff is enacted. While I am willing to grant that our present tariff is anything but perfect, I do contend, and strongly, that as long as inequalities exist between nations, particularly with reference to the living standards therein, protective legislation is necessary, but it should be founded on the broad principles of providing employment and stability for the political unit it is designed to protect. Certainly it is utter fallacy to levy prohibitive tariffs upon comparatively unimportant commodities while leaving entire basic resource industries fully exposed to uncontrolled foreign competition in our domestic market.

Foreign trade of course exists on the principle that "we must buy if we would sell". However, it is not necessary to subscribe to the principles of free trade without restrictions in recognizing that maxim. In theory free trade appears to be a splendid proposition, but there are other factors of very practical nature that must be given careful consideration if we are to preserve our national industrial integrity.

OUR OWN INDUSTRIES

This address was prepared by Ossian Anderson, president of the Puget Sound Pulp & Timber Co., and delivered by George W. Houk, executive vice president of the Hawley Pulp & Paper Co. at the twentieth annual meeting of the Chamber of Commerce of the United States, held in San Francisco, California, May 17 to 20, 1932.

Beginning with the later months of 1929 the world has been afflicted with an economic depression perhaps of more widespread character than has ever been experienced. The depression has been naturally a principle factor in retarding our foreign trade, but hand in hand with this condition has been the effort of many nations to follow the natural instinct of self preservation by employing every device to increase exports and decrease imports. In face of such an international industrial psychology no one nation can afford to lift its own barriers to risk the chance of being flooded with commodities of foreign manufacture in a highly competitive buyers' market.

Perhaps the most serious disturbance to the world's foreign trade structure had its beginning last fall when England abandoned the gold standard thereby precipitating a general depreciation of exchange which today extends to some forty countries. This debasement of money, wilful or otherwise, has been as deadly to the United States as a two-edged sword. It has practically eliminated the chance of an export trade in any commodity except such items that other nations find it necessary to purchase from us. Our dollar has been left on a high plateau as the monies of most of the nations of the rest of the world have receded in value. The effect has been to permit these other nations, with the benefit of depreciated exchange, to cut the selling prices of their commodities in conformity with the advantage gained by the percentage of their coinage depreciation from gold values.

Depreciated exchange has not only robbed us of the opportunity of participating in the export market, but has served practically to wipe out the protection for our domestic industries in their own home market which our tariff legislation is intended to provide. The forty odd nations whose coinage is depreciated are thus armed with a new and powerful trade weapon to destroy us at home as well as abroad.

As a specific example let us take the British pound sterling. It has a normal gold par value of $4.86½. In normal times a commodity that sold for ten pounds in the United States would bring the Briton $48.65 in American gold. Today the British manufacturer in offering his wares at the same price—to him—of ten pounds, is in effect quoting to the American purchaser a price carrying a 25% discount. The American purchaser pays out only approximately $34 in gold. This is obviously a tremendous advantage for the American purchaser, and where the purchased goods are of a character in no way competing with United States manufactures, as for example raw silk, rubber, coffee, the advantage is national. But where, by benefit of depreciated exchange, the foreign manufacturer is permitted to quote prices 25% under the costs of our own domestic producers, and in our own domestic market, the damage that can be wrought upon our internal commodity price structure is as obvious as is the unfairness of the practice. Any increase in the import side of our foreign trade under such distressing circumstances will have only the value of permitting the statisticians to compute larger totals.

At this point we encounter the argument that when a country abandons the gold standard it suffers the penalty of having to pay a heavy premium on its imports because its own money is worth less outside of its own borders. In normal times this is true, but when you have forty nations all operating on a depreciated exchange basis in approximately the same degree you encounter an entirely different set of factors than when an isolated nation is forced to abandon gold. Under the present set-up these forty odd nations can trade among themselves at no disadvantage for their requirements, whereas in their export business they are in an admirable position to raid the markets of the gold standard countries.

It was of course most unfortunate that when a world-wide depreciation of exchange became evident that the United States was not equipped with the necessary legislative machinery to meet the emergency. It is discouraging to admit that to date efforts to secure this necessary legislation have met with no success in Congress. That simple statement is not enough. I make the charge here and now that this vital, national legislation has been stubbornly opposed in the open and under cover by some few selfish interests who were in a position to reap temporary advantage.

In the meantime our domestic industries have been further depressed by an influx of foreign commodities, both duty-free and tariff-protected. The practical and very unsatisfactory result has been that in a time of very serious unemployment our domestic industries have been forced to curtail or to close down entirely for sheer inability to produce and sell goods at prices lower than the cost of manufacture. Our domestic industries have been forced to stand idly by and see

their commodity price structure wrecked in their own backyard.

One of the most vicious examples of the effects of competition with depreciated exchange has occurred in the pulp and paper industry, with which industry I happen to be particularly familiar. To give you an idea of the important part played by the pulp and paper industry in our foreign trade let me cite the three leading commodities imported into the United States in the year 1931. They follow: Raw silk, $191,000,000; coffee, $175,000,000; and pulp and paper, $173,000,000.

Of the first two we do not, and perhaps can not, produce a single pound. They are natural items of foreign trade. Both are duty free. In the paper industry all grades of finished paper, with the exception of standard news print which is free, are adequately protected. Wood pulp, from which the greater bulk of our paper requirements is manufactured, is also free. For reasons that it is not necessary to go into here both wood pulp and news print are on the duty-free list altho we have ample pulpwood resources, engineering skill, and idle capital sufficient to meet our entire domestic needs, to say nothing of thousands of idle workmen who are anxious to go to work. Our exports of pulp and paper are a very negligible item, and this fact is evidence in itself that foreign manufacturers are able to command the entire potential export market because of their lower manufacturing costs, made possible of course by their generally lower scale of wages.

Sweden and Canada are the greatest exporters of wood pulp and news print to the United States. With the advantage of an exchange depreciated approximately 30%, Sweden was able to land on the Pacific Coast within recent months many thousands of tons of news print at a price $10 below the already low and unprofitable price quoted by American manufacturers. Meanwhile the price on wood pulp was lowered from $8 to $12 per ton, or approximately 25%. Despite these drastic price declines the returns to the Swedish and Canadian manufacturers in kroner and Canadian dollars respectively has remained practically the same as before their currencies were debased.

The export situation has been so favorable for the countries whose money is devalued that it would be amusing, if it were not so tragic, to note that government officials in these countries have worried for fear a too rapid recovery of the exchange rate would dull the very valuable trade weapon which fate and the laws of economics had placed in their hands.

The pulp and paper industry has its foundations in one of our great natural resources—the forests—and, like our other natural resource industries, has suffered severely from depressed commodity prices and increased competition in its own domestic market because it lacks equitable protection. It is our domestic producers and manufacturers of duty-free commodities that must bear the first severe shock of an invading foreign competition. But it is folly to believe that the damage is confined to them. Disaster in any important section shakes the entire industrial structure and it would seem the part of good logic to eliminate these shocks and provide a greater national stability.

Let us consider again these 48 United States and the tremendous free trading area which they provide. Let us consider the importance of our natural resources and the necessity of protecting the industries founded upon them for reasons of economic independence, industrial stability, a fully employed citizenship, and national safety. Perhaps a reasonable policy of protecting and serving home markets, avoiding the drastic competition so prevalent in world markets, would be our best contribution to the early recovery of those nations who now depend upon those same markets for the outlets that sustain their life and trade.

Our tariff policy in the future will require a greater consideration of the natural resource industries. It will demand more flexibility and expert administration to meet the rapid changes taking place to the end that our home markets be preserved for our own industries and resources and not be judged on the basis of what may add a few dollars to our export totals. Let us build our foreign trade upon the basis of common sense and not as a pagan sacrifice to statistics.

It is our right, our duty, to look first to the welfare of our own house

We should permit the fact-finding department of our Government (the United States Tariff Commission) to recommend quick changes in our tariff schedules and this without the costly delays and legislative action now required before the Commission can even inquire into an injustice perpetrated on unprotected industries. The final decision should rest with our Treasury Department, backed by the judgment of an expert Commission. This would serve to remove this function from the slow and political-tainted method now employed.

We should not judge tariff schedules on the basis of retaliation but on the basis of welfare for the greatest number of our own citizens and the economic welfare of the world as a whole.

The early enactment of some form of temporary relief thru a currency equalization measure on imports, re-establishing the competitive relations between our country and other nations that existed before the debasement of currency values took place, is recommended and a resolution has been prepared and is offered herewith.

I would suggest that this national organization work out and recommend rational legislation extending the authority and work of our Tariff Commission so that they be charged with the responsibility of looking after equitable tariff legislation and thereby avoid the unscientific methods now employed in formulating our tariff laws. It should be their duty to make complete recommendation as to changes needed in tariff schedules provided and the further duty to recommend such changes as may be found necessary from time to time affecting unprotected industries.

In conclusion I earnestly recommend a revival of that national feeling which has permitted us to accomplish so much in the past. America for Americans cannot in justice be interpreted as a selfish policy. It is our right, and duty, to look first to the welfare of our own house.

The Inequalities of Protective Tariffs

In speaking of tariffs, as far as justice having anything to do with them, that lady whose image graces so many domes on state capitols and county courthouses, ought to be sculptured in different fashion. We are accustomed to seeing "Justice" standing on her lofty pedestal, the balance scales in hand and a blindfold over her eyes. Why not picture her more accurately? For example, with her head in the sand, ostrich-like, and a battalion of hoodwinkers standing about, armed with distorted mirrors to confuse as to the true position of the sun of truth.

In the following news item sent out by the West Coast Lumbermen's Association, which organization has fought valiantly for an equitable tariff protection on forest products, there is an excellent little story of tariff inadequacies. Read it yourself:

"A package containing safety razor blades of a popular American make and 120 lineal inches of the finest Royal grade Western red cedar shingles was forwarded to Senator Wesley L. Jones at Washington, D. C., in May by the management of the Cedar-Craft Products, Inc., Seattle, with a letter stating the razor blade and the bundle of shingles were worth exactly the same wholesale—9 cents—yet the razor blade was protected by a tariff of one cent on each piece plus 30 per cent on the value, while Washington shingles were not given tariff protection.

"The Royal grade of shingles are ½-inch thick and 24 inches long and are made for the most discriminating builders by mills in Canada and in Washington. Practically the entire production of Royals in Canada, it was stated, find a market in the United States.

"Both the heavy duty shingle and the razor blade, the letter pointed out, are used by the American public; one provides a roof for a family lasting from 20 to 40 years, while the other furnishes a few shaves to an individual. Yet the long-service low-cost shingle is not protected by a tariff, while the short-service steel blade is so protected in spite of its short life in use. Also fully 80 per cent of the selling price of the American shingle at a Washington mill goes directly to labor. The 120 lineal inches of shingles shipped to Senator Jones when laid 7½ inches to the weather, would cover 6¼ square feet of roof."

The story of wood pulp and news print, both products of the forest, is even worse. Last year, for example, when the consumption of paper was going generally down, our American producers of wood pulp had not only to take up the slack in a decline in consumption, but they had also to suffer an unjust loss imposed upon them by an increase in imports. Sweden, for example, exported to the United States in 1931 a total of 673,051 metric tons of wood pulp of all grades, a substantial increase over the 649,692 tons sold in this country in 1930. Who stood that loss? None other than American pulp mills, now working at slower and slower pace and forcing American workmen out upon the street.

No, Justice, your sculpture is inadequate.

Swedish News Print Output Large

Swedish newsprint mills turned out during March, 22,738 metric tons of paper, compared with 23,234 tons during the preceding month and 17,968 tons during the corresponding month last year. Production for the first three months of the current year has totaled 69,123 tons as against 68,174 tons in the preceding quarter and 47,956 tons during the corresponding quarter in 1931.

BUT STILL IN THE UNITED STATES

The federal tariff commission in a special report to the house of representatives on the effects of depreciated currencies on imports of wood pulp and pulp wood makes reference to "the far distant Pacific coast." Needless to say, the report didn't favor very much the matter of suitable adjustments in import schedules to make it possible for our pulp mills out here to operate profitably in the face of this ruinous competition. Any group of men who look upon us as residing and doing business in "the far distant Pacific coast" naturally can not be sympathetic to anything we want or need. We are too far away to matter much in their general scheme of things. What we need, it is very evident, is relatively unimportant in their viewpoint. It is little slips like this that explain a lot to us when we present our all too infrequent pleas before congress for remedy. We live too far away to count much. If we resided in the Middle West, there might be some excuse for listening to our plea and giving some help, but even those who live there don't seem to be getting much out of our congress. They, also, are away out in the Middle West and as for us, we are apparently hardly even a part of the nation. Nor is this the first time that such a provincial outlook upon the whole of the Union has operated to the detriment of our industry. If our lumber and pulp industry were located in one of the Atlantic state groups, right under the noses of the powerful congressional bloc that controls our legislation, there would be no question about the protection it would receive. The amount would be the only part to be settled. But being out here on the "far distant Pacific coast" it receives the scant attention indicated in the tariff commission's report. We don't belong.—From the Everett (Washington) Herald, May 19, 1932.

Sure, Depreciated Exchange Doesn't Hurt Us!

Depreciated exchange not only permits a flood of imports to swallow up the business in our own United States market, rightfully belonging to our American factories and American workmen, but it is shutting us out of the export market, and effectively. Don't take our word for it. Listen to the other side admit it, as for example, this statement in the annual issue of the combined publication, "The Swedish Timber Trades Journal" and "The Swedish Wood Pulp Journal", published in Stockholm on April 30, 1932:

"Particularly in the British market, Swedish redwood plywood is at present in a better position than might be expected in view of the general situation. Altho this commodity is subject to a 10% duty it is not manufactured in England, and as the same duty applies to our great competitor America, with its Oregon Pine, it can have no particulary bad effect on the consumption of Swedish plywood. **The high dollar exchange on the one hand, and the depreciation of the krona relative to sterling on the other, tend to hinder British purchases of Oregon Pine but to help the buying of Swedish plywood at prices at once satisfactory to buyers and sellers."***

*The emphasis is our own.—Editor.

West Linn Will Condense Schedules

Last year Crown Willamette Paper Company at West Linn went on an operating schedule of alternate three-day and four-day weeks. This year a different plan is to be used for the Crown Willamette mills.

The mills will operate full capacity for as long a period as is warranted and then shut down entirely for a week or two during the summer months—July to September. Then they will start up again on a full week basis and run until another shutdown period comes.

Pulp Mill Blameless — Smelt Run Second Largest

Three or four years back those little fish that come by the millions up the Columbia River to swarm the tributaries and spawn, the little silver smelt, turned up absent. They had missed the schedule. Hundreds of fishermen waited on the banks with their gear, ready to scoop the innocents by the bucketful out of the stream and into the boats.

But the fish didn't come. It was their year to go up the Cowlitz River, which flows into the Columbia River at Longview, Washington. Some days went by and then came frantic reports that the smelt had pulled a sandy on their enemy, man, and had gone up the wrong river.

What caused all this? Why the change of age-old habit in the silver smelt. There must be cause.

"Ah", some fishermen cried in inspiration, "it is that new pulp mill at Longview. They make kraft pulp and paper there and dump their poisonous waste liquors into the river. That's what has turned the smelt. Driven them away."

"The pulp mill has driven the smelt run away," echoed far and near.

It was quite a song and dance while it lasted. Wild hunch, and nothing more. But demonstrative of the power of mob rumor. Facts have since showed things in true light.

Last year, for example the catch of smelt on the Washington banks of the Columbia and tributaries was larger than ever. This year it was only slightly less, nearly 1,500,000 pounds to tell the truth.

The smelt continue to come. The pulp mills (there are two of them at Longview now) still discharge liquors into the broad river, muddying up the turbid stream in much the same manner as one who would let fall a single drop of ink in an outdoor swimming pool.

Hawley Improving Grades

Hawley Pulp & Paper Company has produced recently some high grade bleached sulphite and groundwood magazine newsprint for Sunday supplement use. Both the Oregonian and the Journal, Portland dailies, which take a large bulk of the Hawley newsprint production, have used sample lots of the paper for their Sunday magazine sections. It is especially adapted for color printing.

Only two machines, producing newsprint, are operating at the Hawley plant at present, but the management looks for a considerable pick up to come soon in fruit wrap business.

A new salesman, C. C. Darby, has been added to the Hawley staff, and his work is to sell fruit paper to the apple and pear growers and shippers of the Medford and Hood River orchard districts.

George W. Houk, vice president, said that he looked for a substantial tonnage of fruit wrap this year, which would keep the mill busy for a long period.

Puget Sound Closes Everett Mill

Just short of two years after it began production the Puget Sound Pulp & Timber Company's 200-ton bleached sulphite pulp mill at Everett, Washington, ceased operations on June 1, 1932, for a period of thirty days or more. The plant, rated as one of the most modern of its kind in the world, has maintained an exceptional production record in the matter of both quantity and quality.

"The bleached sulphite market has been going steadily down for the past two years," stated President Ossian Anderson in remarking on the mill's closing. "However, since the currencies of the several pulp producing nations, exporting to the United States, have depreciated so radically in the past eight months, the competitive conditions for the domestic pulp producer have become untenable.

"Our closing now is strictly due to the very unfair competition that has been imposed upon us by the depreciated exchange of other nations. It is very unfortunate at a time like this when unemployment is so widespread. Closing the mill means that in excess of 200 men in the plant are without work, and in additions several hundred more who have been cutting and transporting pulpwood are likewise without anything to do.

"Continuation of conditions as they are without some form of emergency relief will mean the extinction of the domestic pulp industry, and by that is meant not only the mill that makes pulp for sale but the mill that makes its own pulp for conversion into paper in its own plant. Many other United States pulp mills have likewise been forced to suspend operations."

The Puget Sound Pulp & Timber Company has three pulp mills. The 60-ton unbleached sulphite plant at Anacortes, Washington has been idle for many months. The Bellingham mill, with a daily capacity of 90 tons was still in operation at this writing.

Moratorium On Vancouver Kraft Bonds

At an adjourned meeting at the Portland Hotel, Portland, June 1, holders of Vancouver Kraft Co., Ltd., 6½% first mortgage bonds dated May 15, 1928, granted a four-year moratorium on the interest and sinking fund payments on the bonds on which the company went in default May 15, 1931.

Under the terms of the agreement the Columbia River Paper Company is to advance sufficient money to meet shut-down expense of maintaining the property, a partially completed 100-ton kraft pulp plant at Port Mellon, B. C., up to May, 1935, receiving for such advances four-year 6½% notes of Vancouver Kraft Co. The Columbia River Paper Company can terminate the agreement on 60-day notice. The National Trust Company, Ltd., of Toronto, Canada, trustee of the Kraft bond issue, recommended granting the moratorium.

The meeting was originally called for May 4, but only about $134,500 of the total issue of $1,143,000 of bonds were represented, and it was necessary to adjourn the meeting. At the adjourned session however, it was necessary only that a majority of the bonds represented by those present should favor the proposal. It is understood that only a small percentage of the bonds were represented at the meeting, but that about 75 per cent of these voted for the moratorium.

Suit has been brought by a Spokane committee of bondholders charging misrepresentation in the sale of the bonds. A Portland bondholders' committee is considering joining in the Spokane action or filing separate suit.

F. W. Leadbetter, president of Columbia River Paper Company, is president also of Vancouver Kraft Company.

A deposit of talc satisfactory for the highest grades of paper has been found on the Pacific Coast and is already in use at the Camas mills of the Crown Willamette Paper Company. It was discovered in the Sierra Nevada mountains and is known as Sierra talc.

Superintendents Hold Annual Meeting

The American Pulp & Paper Mill Superintendents' Association closed an interesting and successful three-day meeting at Buffalo, New York, on June 4 with election of the following officers for the ensuing year.

President—William H. Brydges, Bedford Pulp and Paper Company, Big Island, Va.

First Vice-President—Herbert T. Randall, Champion Coated Paper Company, Hamilton, Ohio.

Second Vice-President—Killey E. Terry, S. D. Warren Company, Cumberland Mills, Me.

Third Vice-President—Charles Champion, Millers Falls Paper Company, Millers Falls, Mass.

Fourth Vice-President—Michael Redmond, Kalamazoo Paper Company, Kalamazoo, Mich.

Fifth Vice-President—F. J. Timmerman, Northern Paper Mills, Green Bay, Wis.

Robert L. Eminger was continued as the secretary-treasurer of the association.

Resolutions were adopted:

Urging cooperative study on correct rates for depreciation and obsolescence in the industry, the prevailing rates being considered antiquated due to rapid technological progress;

Requesting continued cooperation of paper mill managements in the activities of the association.

Reorganizing Price Brothers

Lord Beaverbrook, the Canadian who first made a fortune in the cement and pulp industry and later gained world prominence in Great Britain as industrialist and politician, is taking a hand in the reorganization of Price Brothers, one of Eastern Canada's largest newsprint enterprises.

Beaverbrook attended a meeting of the company in Quebec early this month and suggested a plan whereunder holders of all classes of company securities would be required to make a sacrifice. He also recommended less common stock and fewer directors. The old board headed by Col. J. H. Price has resigned, but Mr. Price will continue with the new panel as operating vice-president. The new president will be Allan Aitken, younger brother of Lord Beaverbrook, with Major Andrew Holt, son of Sir Herbert Holt, president of the Royal Bank and one of Canada's biggest industrial magnates, as vice-president.

Lord Beaverbrook made it clear that he did not favor inclusion of Price Brothers in the consolidation program now being worked out by E. W. Beatty, K. C., president of the Canadian Pacific Railway, and a group of Canadian bankers. He prefers that the company continue as an independent unit.

The Oyster Again

The somber oyster of the southern reaches of Puget Sound has again looked askance at the pulp mill—or, rather, the oysters' keepers have. Rumors that sulphite pulp mill liquor from the Rainier Pulp & Paper Company at Shelton, Washington, were being dumped in the adjacent bay were promptly met by Resident Manager D. B. Davies by a simple presentment of facts. He invited a delegation of oyster men to inspect the plant and view for themselves the system employed by the mill to pump the liquor to open air pools on the hillside for evaporation.

Fire destroyed the plant of the Federal Paper Company, waste paper dealers, in Portland on May 24. The company is owned by the Goldberg Brothers Bag Co.

Woodfibre Mill Closed Temporarily

The Woodfibre mill of the B. C. Pulp & Paper Company, which has a daily capacity of 100 tons of unbleached sulphite pulp, has been shut down since May 20 and will probably remain out of operation for two months. The company is taking advantage of the slack season to effect some extraordinary repairs to the plant, and during the shut-down the digesters and practically all other large units in the Woodfibre mill will be overhauled. The management expects that by the time the repairs have been completed the market will justify capacity production again. The work is being done by the mill organization without outside supervision.

Meanwhile the B. C. Pulp & Paper Company's mill at Port Alice, at the north end of Vancouver Island, is continuing to operate.

Some of the spruce logs previously absorbed by the Woodfibre mill are now being marketed at sawmills in Burrard Inlet.

Jorgenson Sees Prospects in British Pulp Trade

The Panama Canal may become an important factor in development of the offshore trade in British Columbia pulp, according to O. A. Jorgenson, secretary of B. C. Pulp & Paper Company, Vancouver.

"There is no reason why we should not be able to ship pulp to the British Isles via the Panama Canal if prices are right," said Mr. Jorgenson. "We should be able to build up the Canal traffic in pulp just as the wheat traffic has been developed on that route. It's just a matter of making shipments early so they will reach the market according to requirements."

The reason for the interest in this Panama Canal trade is the expectation that the British Empire Economic Conference and subsequent events will open up an important market in the United Kingdom for British Columbia pulp. British buyers are said to be anxious to break the domination of Swedish pulp in their market.

High Water On Columbia

Danger of high water affecting mill operations on the Columbia and on the Willamette appears to be past, although there is still a possibility that extreme warm weather will precipitate heavy floods that may shut down some paper mills.

Unusually heavy snows in the mountains in British Columbia near the source of the Columbia indicated that the river might be in high flood this spring, but there has been no long stretch of warm weather to melt the snow, so that so far it has run off gradually.

The Crown Willamette mill at Camas, according to George P. Berkey, vice president, would have to close down if the water reached the 33-foot level, but so far it has been well below that stage. The only effect to date has been to make towing easier downstream and to make it harder for the boats going upstream.

The Willamette has not risen high enough to interfere with operations at Oregon City or West Linn.

Crown Closes Logging Camp

Crown Willamette Paper Company closed its Young's River camp June 1, but is continuing logging operations in the Cathlamet camp. The company now has an unusually large supply of logs in the river as the lumber mills, which absorb the fir and cedar logs cut in the course of the production of spruce and larch for pulp, are not very busy.

The passivating effect of sulphite liquor on STAINLESS STEEL

By H. H. RICHMOND, Research Engineer
Electric Steel Foundry Co., Portland

THE corrosion of materials is one of the most important if not the most costly "operations" in the pulp mill. To here classify corrosion as an operation is fully warranted when measured by its effects, for altho we do not have a corrosion department in the same sense that we have an acid plant or a digester room, etc., its costs in maintenance and lowered quality of product are just as important in the end as the cost of any other department or raw material in the mill, for the same agents that break down the chips in the useful products are just as indefatigueably tearing down the chemical apparatus by which the processes are controlled. As to figures for this loss, we have only to refer to the work of the 1930 Corrosion Committee of TAPPI and the results tabulated from the answers to the questionnaire presented to the sulphite mills of the United States and Canada. These figures, I believe, show an annual monetary loss of $98.75 per ton daily production or nearly $5,000.00 per year for a 50-ton mill, covering materials only. To this amount must be added much more in labor, loss of production, etc.

The designing engineer is constantly seeking for new or better materials which will give greater scope to his ideas and render more faithful performance in the duties he assigns to them, while the operator is equally on the alert to benefit by any improvements in either methods or materials which will provide lowered costs, better products or both. Both engineers and operators have given much consideration to various materials that will resist the violent corrosive effects of the sulphite liquors. Acid resisting bronzes, special alloys, lead and other materials have been put to use, and many coatings or linings ranging from paint to porcelain and rubber have been employed, each having its peculiar field of usefulness and corresponding physical or chemical limitations in practice. Late among the corrosion resisting materials have come the Nirosta steels with their promise of greater strength, freedom from attack and consequent cleanliness.

From being actively interested in the metallurgy and the production of steel, considerable data has come to the speaker's attention which has emboldened him to suggest as an attractive line of research to the chemically minded, the study of these steels with particular reference to their corrosive behavior and the passivating influence of the sulphite cooking liquor as it is now used or may be modified. This is undertaken because of the knowledge that many of the TAPPI members are excellently qualified to carry out such a line of study, and the belief that it would prove both enlightening and profitable.

A short summary will best outline this thought. As a reminder, to those less familiar with the subject of stainless steels, Nirosta depends in common with all corrision resistant steels upon chromium as a fundamental alloying constituent, varying in quantity; the range being from 18% to 30%. The presence of this element in any steel always lowers the content of carbon in the micro-structural constiutent Pearlite, and raises the critical temperature of the carbon change point, or minimum temperature to which the steel must be carried before quenching will produce hardening. Among other influences it also decidedly retards the velocity at which the carbon diffuses thru the alloy when hot. Nickel, in combination with the above mentioned amounts of chromium, varying in proportion from a minimum of around 8%, is also employed as an alloying agent with the iron and is by all means the most important, next to chromium, of all the metals added to corrosion resisting steel. It very profoundly affects the physical and corrosion resisting properties of the steel, lowering the temperature ranges already referred to and producing a steel which is of a staple austenetic structure at common temperatures. Molybdenum in varying amounts is also used in most cases to secure greater corrosion resistance to the action of sulphurous acid at high pressure and temperatures.

Corrosion is a subject upon which such vast quantities of experimental work have been done and concerning which so much technical and scientific literature has been published that it is only possible here to mention the theories advanced by the most noted workers in this line. Considerable light has been shed on the sub-

Much has been written and more has been said on the subject of stainless steels, but the subject has given no evidence of becoming exhausted. In this article the metallurgist adds some interesting points that will directly interest the pulp maker.

ject by the works of Evans, Friend, Bengough, Nerst, Vernon and others, but much yet remains to be explained. The only two theories of importance until quite lately were the electro-chemical and the acid theories. The first of these held that variations or imperfections, ever present in even the best of metals, were sufficient to set up electro-chemical effects sufficient to allow corrosion to take place, while the latter held that some trace of a free acid was necessary to start corrosion. Neither theory, however, fully explains all the phenomena of corrosion and other, and conflicting theories, have been put forward from time to time to account for the variations or discrepancies in the former ones, leading to considerable confusion. The recent works of U. R. Evans ([1]) following that of J. Ashton, sets at rest many of the contradictory claims and is based on the belief that corrosion, while electro-chemical in nature, is due to differences in potential set up in different portions of a sample due not alone to variations in the metal but variations as well in the amount of dissolved oxygen which the bathing liquid contains. The work of this authority have been very important as they show that in such a case the action is the result of difference in oxygen concentration. That part of the steel sample in contact with the water containing the least oxygen in solution becomes the anode, and suffers more rapid attack than those portions which are immersed in the water or liquid containing the greater amount of dissolved oxygen, which parts act as the cathodes. The English writer, J. H. G. Monypenny ([2]) cites this as explanatory of the "known fact that excessive corrosion is often produced at places where oxygen has the least access — as pits or grooves, or under dirt or debris, including the products of corrosion which may have settled on part of the surface of the metal." This authority states in substance that some doubt may exist as to whether physically uniform, absolutely pure iron would corrode in absolutely pure water. There can be no doubt, however, that the purest available commercial iron does corrode in distilled water. There is also no doubt that the iron goes into solution in the water and is subsequently precipitated from it as a hydroxide, either in the vicinity of the attack or near it. Secondly, the less homogeneous, either physically or chemically or both, the sample of iron, the greater as a rule the corrosion tendency. Thus the addition of carbon to iron forms a carbide whose separate particles may be more or less uniformly distributed through the mass of the metal. This iron carbide is electro-negative to iron and tends to increase the corrosion rate of the latter. When, however, the primary products of corrosion are themselves insoluble they form as a film or coating over the exposed surfaces and tend to retard or even prohibit further attack. Since all corrosion depends on a supply of dissolved oxygen and water (although the rate of attack may be influenced by a number of variables) any coating of insoluble corrosion produts on an anodic area would retard the corrosive action. The metal surface may even be completely covered with such a film or coating varying in thickness from a thin layer of a few molecules to one of mensurable thickness, and subsequent corrosion be even entirely stopped. The metal is thus rendered "passive" to further attack until such oxide coating is rendered vulnerable by outside means either chemical or physical. In the so-called stainless steels addition of proper amounts of chromium as a solid solution in the iron renders these steels almost totally insoluble in water. Just why this is the case is not definitely known but it is generally conceded to be largely due to what is known as "passivity". Probably the greatest value of the Nirosta, or chrome nickel, steels lies in the ease with which they form and retain this passivating or strong protective coating.

In 1927 Ulick R. Evans proved the soundness of this theory by actually isolating this oxide film. His method was quite simple in principle, at least after he succeeded in demonstrating it. He strongly heated a polished strip of iron at one end, keeping the other end cool, thus producing on the surface a layer of oxide constantly varying in thickness from nearly zero at the cold end to a maximum at the hot end. Between the extremes it reached a suitable thickness where it set up interference effects between the light reflected from the top of the film and that reflected from the metal underneath. This interference produced optical color values which we recognize as the usual "temper" colors. He then dissolved the original strip with iodine solution, washed, handled, and actually measured the oxide film remaining. He further analyzed the film proving it to be feric oxide in the case of base strips or pure iron and mild steel. The thickness of this film for these two metals, even on exposure to air for a short time, he gives as 0.000002". Being so thin and in optical contact with the metal they are, however, invisible to the naked eye until separated from the parent surfaces on which they were originally formed.

The metal chromium exhibits passivity effects in a much more pronounced degree than iron and gives a far greater strength and stability to the oxide film formed, with consequently increased protection to the underlying metal. This phenomena is true even in face of the fact that chromium itself has a great affinity for oxygen and is supposed to oxidize almost instantly

when exposed to the air. It is probable that high chromium steels owe their stainless properties to such a film produced almost instantaneously on the surface of a freshly prepared sample when exposed to the atmosphere; in fact, there is very good evidence that such is the case. Further, the austenitic chrome nickel steels such as Nirosta exhibit more striking evidence of this nature. The following experiment reported by Monypenny is typical. The steel sample he used is normally very slowly attacked by 10% sulphuric acid especially when heated. If, however, it be placed for a period in nitric acid it may be subsequently immersed in 10% sulphuric acid for days without any attack at all being produced. A further interesting and valuable fact is noted by the same authority. He found that similar samples when immersed in sulphuric acid of strengths suitable to produce maximum attack were practically unaffected if a small amount of copper sulphate or ferrio sulphate were added to the solution. This was true even at elevated temperatures. This effect of the copper sulphate to produce passivity, probably due to its oxidizing nature, was also noticed to prevail over long periods of time after being removed from the solution. Also the action once started, the concentration of the copper sulphate in the acid could subsequently be greatly reduced with only very gradual damage to the original passivation. Thus acid strengths and time of immersion otherwise sufficient to cause a 50% loss in weight of sample, were restricted to a negligible loss by the addition of fairly small amounts of copper sulphate. These phenomena were also noted by Dr. Hatfield ([3]). All this suggests the possibility of altering the sulphate liquor to take advantage of the passivating properties of unobjectionable reagents. For it is a very important property and necessary for any commercial usage, that a corrosion resistant material have not only ability or tendency to create and preserve a strong homogeneous protective film but likewise the ability to repair or build up new protection when the old is partially destroyed by any means. An addition of molybdenum to the chrome nickel alloy apparently augments this property, while it also decreases the tendency to form local voltaic cells as a result of deformation or cold-working the metal. The exact nature of the sulphite liquors as they affect these steels is still shrouded in considerable uncertainty, and reliable data of this specialized nature is not plentiful. A recent thesis prepared by Norton L. Peck in fulfillment of the requirements for the degree of M. S. at the Oregon State College should be of considerable value to the mill chemist interested in this subject.

The great progress made in the application of corrosion resisting metals to the pulp and paper mill in recent months suggests the urgent pursuit of further knowledge on the subject.

The foregoing is a very brief glance at the general subject of corrosion and passivity for it is very obvious that in the few minutes allotted to this subject no comprehensive consideration could be given to the subject matter of many volumes of scientific materials, the perusal of any one of which would occupy as many days. It is rather the speaker's purpose to present a course of investigation in which considerable work needs to be done before a thorough understanding of the sulphite problems can be had.

NOTES:

Evans

(1) J. Inst. Metals. Vol. 30 Pa. 239.
Trans. Faraday Soc. Vol. 18, Pa. 1.
Trans. Faraday Soc. Vol. 19, Pa. 201 and 789.
Corrosion of Metals by the same author.

J. Ashton

Trans: Am. Electro Chem. Soc. Vol 29 (1916) Pa. 449.

(2) "Stainless Iron & Steel". N.Y. John Wiley & Sons, 1931.

Hatfield

(3) "Development of Stainless Steel". Messrs. T. Firth & Sons.

West Coast Lumbermen's Association to Carry On

After a first announcement that the organization would have to be abandoned on June 1 due to lack of support, stockholders of the West Coast Lumbermen's Association subsequently in session at Tacoma, on May 31, after thoroughly canvassing the situation within the industry, unanimously decided to continue the association and to carry right along all of its principal activities, which include the following: Mill inspections of lumber; supervision of member's grades; issuance of mill certificates; re-inspection certificates; grade marking; traffic work, and essential statistics.

The action of the stockholders also included a reduction of dues from 10 cents a thousand board feet on shipments, for the combined mill and logging unit to 3 cents; and from 5 cents for the individual lumber manufacturer or independent logger, to 1½ cents. This decrease lowers payments by members to the point where the stockholders believe support will be gained from many companies not now members.

A membership drive, led by members of the Board of Trustees and selected members in the various areas of the Douglas fir region, will be undertaken at once, the association announced, with the objective of securing 80 per cent of the capacity as members within the coming sixty days.

Colonel W. B. Greeley announced his conviction that the association could get the required membership at the lower dues basis and that the income would be sufficient to carry along the more essential activities—grading, inspection, certificates, grade marking, traffic and statistics—during the period of depressed trade through which the industry is now passing.

The meeting was called by instruction of the trustees for the purpose of deciding whether or not the association should be continued and on what basis of activities. The feeling at the meeting was, as expressed in the vote, unanimous that the essential activities of the association should be continued in the interests of the industry, its customers and the public.

May Organize Coast Mill Labor

It is said to be rumored in labor circles that the pulp and paper unions will soon make another effort to organize the mills in the Pacific Northwest. They are said to be affiliated with the American Federation of Labor. No efforts have been made to organize the Pacific Northwest since 1919 when a strike called at Oregon City and Camas resulted in a victory for the mills.

CUBIC MEASUREMENT of pulp logs

By E. F. RAPRAEGER
Pacific Northwest Forest Experiment Station
United States Forest Service
Portland, Oregon

Introduction

THE pulp and paper manufacturers of the Pacific Northwest in buying their supplies of wood now use the prevailing unit of measure intended for the use of sawmills buying logs to be sawn into lumber, namely, the board foot. In doing so they are using a very uncertain unit, which may cause flagrant injustice to either buyer or seller and arouse mistrust and instability in the pulpwood market. The paper industry in western Washington and Oregon has grown by leaps and bounds the last decade, and the volume of logs and forest wood that now goes into pulp was valued at $7,875,000 in 1928. The large amount of logs going to the paper mills of the region justifies a better system of log measurement than the board foot and one that will be more practical, fairer and more accurate for the pulp mill buyers and for the log seller.

Pulp manufacturers are concerned with the actual amount of sound wood in a log since the entire volume is used in making pulp chips or ground wood pulp. An index of the quantity of chips or pulp that will be produced can be obtained only if the log volume is expressed in terms of a unit, such as the cubic foot, that measures the actual amount of wood contained in a log.

Fallacies of Measuring by Board Foot

Log rules do not measure the amount of wood in a log. They were devised to indicate the lumber which might be obtained; some of them are close in their estimate, others are not. Variations in excess of 200% for identical logs exist between some of the 45 log rules devised for use in the United States. These variations result either from false assumptions upon which they were founded or because the manufacturing conditions for which they were adopted have been modified. Many rules are based on paper diagrams showing the hypothetical amount of inch lumber that might be obtained in mills of a type existing 75 years ago. Such is the origin of the Scribner and Spaulding rules which are commonly used on the Pacific Coast. Though these rules are the best in commercial use they give nebulous lumber yields for many sizes of logs.

When the Scribner and Spaulding rules were devised, it was the intention of their authors to have a board foot log scale equal a board foot of lumber. Allowance was made for the necessary waste in producing inch boards on the basis of assumed conditions existing when the rules were devised. Since sawmill utilization has improved in the intervening three quarters of a century, the lumber tally is now in excess of the log scale. The resulting overrun is a variable amount; for 12-inch logs, it is in excess of the log scale by 60%, for 20-inch logs, 33%, for 36-inch logs, 7%, and so on, tending to decrease with log size. These overruns are of especial interest to pulp manufacturers who operate a sawmill in conjunction with a pulp mill. It accords with their own experience, namely, that the log rules are unreliable criteria of the lumber tally, though they were devised especially for that purpose. The scale of a raft or of a carload of logs is no criterion to the sawmill man of the amount of lumber and by-products he can manufacture, until he has applied his own individual correction factor, based on experience, for that particular class of logs.

Log rules are still poorer indicators of the absolute wood volume. A large part of the log is considered to be waste in the sense that it consists of kerf wood, slabs and edgings, and it is therefore not measured by the rule. But all of the log is used in making pulp chips or ground wood pulp. A log rule to be satisfactory for the pulp industry should give an index of the actual wood volume. The rules now in use do not do this.

The fallacy of using log scale as an index of absolute volume is shown where similar quantities of pulpwood are decked in piles of the same size. For example in a cord of wood made up of 12″ bolts, the scaled content is 720 board feet, or more than double the scaled volume in a cord of 6″ bolts, which contains only 350 board feet, Scribner rule. Nevertheless, each deck contains 112.1 cubic feet of solid wood and each will yield potentially the same amount of pulp chips. The cubic volume indicates this fact but the log scale does not.

A further illustration of this failure on the part of the log rule to give an index of the cubic volume is presented in Table 1. This table shows that a thousand board feet log scale of small diameter logs contains more wood than does a thousand feet of larger logs. It also shows that logs which are bucked into short lengths contain more wood in a thousand feet log scale

Table 1.—Number of Cubic Feet Contained in a Thousand Feet Log Scale for Logs of Different Diameters and Lengths. (Scribner Decimal C Rule)

Logs Diameter Inches	Number of cubic feet in a thousand feet log scale	
	Based on 16-ft. logs	Based on 32-ft. logs
12	187.5	212.5
24	137.5	145.7
36	129.3	136.2
48	116.2	126.0

than do longer logs, since an allowance for taper is not ordinarily applied in scaling unless the logs are over 40 feet in length.

The table shows that 116.2 cubic feet of wood are contained in a thousand feet log scale for 48-inch, 16-foot logs. A thousand feet of 12-inch, 32-foot logs, however, contains 212.5 cubic feet or almost double the amount for the larger, shorter log. Evidently the log scale is a meaningless index of the cubic or absolute volume.

Further Advantages of Cubic Measure

Besides being a measure of absolute volume, which the log rule is not, the cubic foot has other outstanding advantages.

It has a definite size in which respect it differs from an ambiguous unit like the log scale board foot which has never been described in terms of any absolute dimensions. The cubic foot will be the same size today as tomorrow, the same size in any other region as it is here, and the same size regardless of the length or the diameter of a log.

The use of cubic measure makes no assumption as to the products to be manufactured nor as to the intensity of utilization. Wood is to be sold on the basis of actual volume. What can be fairer? Why should it be assumed, as is done in present log rules, that one-inch boards will be cut by a circular saw in a type of mill that has long since been dismantled It is unfair to the log buyers and the log seller to assume that a certain product will be manufactured. Different products are produced in different plants; inch boards, timbers, pulpwood chips, plywood, shingles and many other materials. And furthermore, few plants have the same typpe of machinery, the same operating policy, and the same degree of utilization.

The cubic foot provides better conversion factors for all classes of products than does the log scale. The relation between the actual wood volume and the number of cubic feet is, of course, indisputable. The relation between cubic volume and the yield of lumber is more clearly defined than the relation between log scale and the yield of lumber. This has been borne out by mill scale studies. The standard cord and the unit (200 cu. ft.) are well known measures already in use that are expressed in stacked cubic feet.

The cubic foot is universally applicable to measuring standing timber, logs in transit, logs in the open market, or logs in any stage of handling. And it is always fair in its measurement. The logs cut from a tree will have the same cubic scale as the portion of the tree from which they were removed, regardless of the lengths into which they were apportioned. Small logs being transported to market will not ride at a cheaper rate because they are underscaled by the log rule. Railroads will be paid for the actual amount they haul. Many freight disputes will be eliminated.

Cubic Measure Adopted in Other Regions

Already there is much precedent for use of the cubic foot. Cubic measure is general in most of the countries of the world and in much export trade. It is now used in cruising and in pulpwood sales in Alaska; it is extensively used by pulpwood men in the East. Pulpwood men in the northeastern United States adopted the cubic foot because it was an intelligible measure of their product and a fairer means of paying woodsmen engaged in piece-rate work. In the West the cubic foot has not been extensively used although a desirable companion unit, the cord (expressed as cubic feet, stacked measure) is the basis of measuring forest pulpwood. The adoption of the cubic foot by the pulp industry is quite as desirable in the West as in the East. It would be a progressive step to put the measurement of pulpwood logs on a systematic businesslike basis.

Technic of Employing Cubic Measure

Measuring the volume of logs with the cubic foot is very simple. Only two measurements are needed, the middle diameter and the length. Regardless of how large or how long the log is, or regardless of the rapidity of taper (as long as it is uniform), these two measurements are sufficient to determine the cubic volume. Tables already prepared show the cubic volume when these two measurements are known. The middle diameter can be determined in either of three ways:

1. By measuring the middle diameter with calipers and allowing for bark, if bark is present.
2. By taking an average of the small and large end diameters.
3. By computing the middle diameter after measuring the small end diameter and the taper increase to the middle of the log.

The third method is the most applicable in view of the conditions under which log scaling is usually done. The following example shows how the middle diameter is calculated when the small end diameter, the taper increase and the log length are known.

Example 1.—32-foot log, 26-inch average diameter (inside bark, small end), taper averages 1 inch in 8 feet.

Solution: A 26-inch diameter plus a 2-inch increase (1 inch increase in 8 feet for the 16-foot distance from the top to the mid-section = 16/8 or 2 inches) makes the middle diameter 28 inches.

The actual taper of each log can be measured or an arbitrary taper representative of the raft can be allowed. Ordinarily 1 inch of taper in every 8 feet of length may be considered average.

Tables are already prepared showing the cubic volume when the log length and middle diameter are known. A part of such a table is shown below. Values can also be marked on a scale stick or calipers as is the present custom.

Solid Cubic Contents of Logs

Length, feet	Average Middle Diameter (in inches)										
	21	22	23	24	25	26	27	28	29	30	31
	Contents (in cubic feet)										
12	29	32	35	38	41	44	48	51	55	59	63
14	34	37	40	44	48	52	56	60	64	69	73
16	38	42	46	50	55	59	64	68	73	79	84
18	43	48	52	57	61	66	72	77	83	88	94
20	48	53	58	63	68	74	80	86	92	98	105
22	53	58	63	69	75	81	87	94	101	108	115
24	58	63	69	75	82	88	95	103	110	118	126
etc.											

Conclusions and Recommendations

The above has shown that board foot log scaling in the Douglas fir region is at present somewhat unsatisfactory, particularly as it applies to the pulp industry. The most fundamental difficulty is the basis inconsistency of attempting to measure logs, so variable in length and diameter, which are to be manufactured into different products, in terms of the board feet that a hypothetical mill might cut from them. It is believed that it would be of advantage to the producer, carrier and consumer of logs to place the measurement of logs and trees on a basis which is stable, systematic and expressive of real volume. It is further believed that log scaling will not be on a stable, businesslike basis until industry adopts a unit of measure that is expressed in terms of absolute volume. The cubic foot is recommended as such a unit of measure.

Characteristics of Pacific Coast Sulphite Pulps

By H. R. HEUER and W. N. KELLY
Pulp Division — Weyerhaeuser Timber Company
Longview, Washington

SULPHITE pulp manufacture is not a new industry in the Pacific Northwest. The late Mr. W. P. Hawley, founder of the Hawley Pulp and Paper Company at Oregon City, Oregon, built the first sulphite mill at West Linn, Oregon, in the eighties. The first digesters erected at West Linn were of all bronze construction, and sulphite men will appreciate that the bronze digester era dates back many years.

From this beginning, the industry has grown through years of experience and scientific application to its present position. Only recently, however, have Western pulps become a factor in Middle Western and Eastern paper making. Prior to the advent of these pulps in the market, they were used entirely in papers made on the West Coast and generally in an unbleached form.

During the past several years, the Western sulphite pulp industry has developed toward the production of high grade bleached pulps and modern mills have been built to produce these high grade pulps for the American markets. The reception of Western bleached sulphite by the paper industry and the excellent papers produced with it as a furnish are evidence upon which the statement may be based that Western bleached sulphite is equal or superior to any bleached sulphite pulp made.

The principal wood used in making sulphite pulp on the West Coast is Western Hemlock (Tsuga heterophylla). It is one of the most abundant woods in the forests of the Pacific Northwest. Over 900 billion feet of this timber are available in the states of Oregon and Washington alone. This 900 billion feet of Western Hemlock would make approximately 900 million tons of pulp. The world production of bleached sulphite pulp is 2 million tons per year, so the potential wood supply in Washington and Oregon is sufficient to satisfy the world's demand for bleached sulphite for a period of 450 years. Another vital element for consideration is the ability of pulp wood species in this section to reproduce themselves. The happy combination of soil and climatic characteristics in this Western Hemlock producing region creates a condition which satisfies all the requirements of these trees to produce in kind. After a section of country has been logged off, the seedlings spring up in abundance. They grow rapidly so that a comparatively small area is capable of supporting a sulphite pulp mill in perpetuity.

Because of the moderate climate in this region, logging is a continuous twelve-month operation. It is not necessary to pile thousands of cords of wood in yards for summer use with the attendant difficulty of changing cooking conditions to meet variation of moisture content as the wood dries out. The Western mills have a continuous supply of fresh wood of uniform moisture content which simplifies the problem of manufacturing a pulp of uniform quality.

The cellulose fibre in Western Hemlock closely resembles that in Northern Black Spruce. Wells and Rue in their U. S. Department of Agricultural Bulletin No. 1485 give the fibre length of Black Spruce as 2.6mm and that of Western Hemlock as 2.7mm. After pulping, the Western Hemlock fibre is long and pliable which may account for the remarkable folding and tearing qualities of paper made from it. Western Hemlock is inherently free from pitch, and pulp made from it gives no trouble from this source on the paper machine wire. This characteristic of Western sulphite is particularly appreciated by mills that are making light weight papers.

Uniformly high alpha cellulose content is the rule in Western pulps. Under ordinary pulping practice, the alpha content runs between 88% and 89% in bleached sulphites.

Western woods pulp easily. At comparatively low temperature and ordinary acid strength, the wood can be cooked in ten to twelve hours. The fibres bleach readily to a high color and, when properly bleached, maintain their excellent physical and chemical characteristics.

The remarkable cleanliness of Western pulps is due to the freedom of the large logs from knots and the relatively small percentage of bark to pulp making fibres in the log. These physical characteristics of the wood, coupled with the modern equipment in the Western mills, assure a uniform cleanliness in Western pulp which has not been approached by pulps made in other sections of the world.

The sulphite pulp mills on the Coast are new and are equipped with the most modern machinery. Each mill built in the West during the past few years has been an improvement over its predecessor. The very best in sulphite mill construction, equipment, and ideas gained from past experiences of European, Canadian, and Eastern operations have been incorporated in the design of these mills. Many Coast-developed ideas, foreign to mill operations of other sections, are being efficiently employed. Each process throughout these mills has been developed to the highest point of operating efficiency, and especially from the standpoint of control which has resulted in a high degree of uniformity. The mill operations are directed by men who have had their training on the West Coast, and men who have had long experience in pulp making in leading Eastern organizations, who understand the wants of the Eastern paper-maker. Each process is carefully controlled by the aid of the latest types of controlling and recording devices.

Other features of these mills include the use of filtered water throughout the mill, eliminating slime troubles; filtered acid; Chemipulp hot acid system; double washing in the blowpits; extensive blending systems, which blend the pulps of the different digester blows, and batch bleaching, tending toward a very uniform finished product. In one 175-ton mill, there is at all times 120 tons of pulp at a consistence of 3½% in the blending tanks. The pulp is riffled over felt rifflers and screened through flat screens with .006 to .008 cut plates, both before and after bleaching. Minton vacuum dryers are used for drying the pulp, making a sheet of pulp which is more easily beaten than is the case when the pulp is dried over open dryers. These mills maintain laboratories elaborately equipped with scientific apparatus. These laboratories are operated by highly trained technical staffs who furnish continuous complete analyses of the mill's product and the raw materials used in its manufacture. A considerable amount of research work is constantly being carried on, the benefits of which will be passed on to the users of these pulps for their information, and used to aid in further improvements of the product.

This paper was read by G. S. Brazeau of the Weyerhaeuser Timber Company, Pulp Division, before the annual meeting of the American Pulp and Paper Mill Superintendents Association, held at Buffalo, New York, June 2 to 4, 1932.

Rumored New Mill for Portland

The Portland Chamber of Commerce has been asked through a third party to make a thoro study of the feasibility of establishing a paper mill in the vicinity of Portland. The request came through accredited sources and is considered by the chamber to be a bona-fide inquiry. Altho the name of the principal has not been revealed, it is known to be one of the leading manufacturers of high grade writing paper. The mill will want spruce as its principal raw material, it is reported.

The Portland chamber, much interested in the proposition, especially on account its coming at such a time when many projects already afoot are lying dormant, is going the limit on providing a careful and thoro analysis. At least three different sites are to be considered in the report. One will be down the coast, and at least one will be close to Portland.

A point that will be particularly stressed in the report is the feasibility of establishing the plant near Portland and rafting logs on ocean-going rafts from up or down the coast. It will be pointed out that from 300,000 to 500,000 feet can be brought on a single raft in one tow at one time.

It is reported that Lester David has worked out a new setup for the mill he has projected for the vicinity of Portland, and on which he has been working for considerable time, and that the proposition is being pushed along. His project, however, is not to be confused with the new inquiry from the East, altho the Portland chamber is assisting in it as well.

Will Argue Freight Rates

June 16 the Interstate Commerce Commission is to hear at Washington, D. C., the oral arguments on Pacific Coast fourth section applications the results of which are of considerable interest to the paper mills of the Pacific Northwest. Hearing on the applications were held April 6 and 7 at San Francisco.

As provided in Gomph's tariff 1-M under authority of the recent commission decision, the railroads have established between Pacific Coast ports class and commodity rates that are arrived at by adding to the going steamer rates differentials prescribed by the commission, which are supposed to equalize the competition between the two transportation services, the railroad freight charge on carloads being all-inclusive, while the shipper by water must pay besides his freight rate, switching, insurance, wharfage, etc. The prescribed differential on paper in carloads is 9 cents per 100 pounds.

The Fourth Section decision permits the railroads to make port-to-port rates on this basis that were lower than intermediate rates. However, there is one restriction; the railroads must earn on such port-to-port shipments a revenue of 6 mills per ton per mile on cars loaded over 40,000 pounds, and 12 cents per car per mile on cars loaded with less than 40,000 pounds. This makes the minimum charge allowed Portland to San Francisco $94, Portland to Los Angeles $136, Seattle or Tacoma to San Francisco $126, Seattle or Tacoma to Los Angeles $160.

In order to meet the revenue requirements of the commission, the railroads have had to put in rates on paper in carloads that are either higher than the sum arrived at by adding the prescribed differential or else necessitate a higher minimum. For example, from Portland to San Francisco the tariff has two rates on paper in carloads; the 29 cent rate, which is exactly 9 cents over the water rate of 20 cents, requiring a 32,500 pound minimum to make the required $94; and a 31½ cent rate on which the minimum is 30,000 pounds, as that is sufficient to make the $94 revenue. There is a further restriction that prohibits the railroads in some instances from making a rate that represents the prescribed differential exactly. That is, that they cannot make their minimum higher than the Western Classification minimum unless the steamer minimum is higher.

They are asking that they be allowed to make the minimum as high as they want regardless of the Western classification, and to reduce the rate accordingly to provide the required minimum car revenue, observing of course the prescribed differential over the steamer rate.

They are asking further for permission to lower the car revenue requirements and have submitted testimony to show that the actual cost of rendering the service is less than the prescribed 6 mills per ton per mile on shipments of more than 40,000 pounds and less than the prescribed 12 cents per car per mile on shipments of less than 40,000 pounds.

They are asking also permission to extend the port-to-port rates to Olympia, Longview, St. Helens and other ports. If the applications are granted Pacific Northwest paper mills will obtain considerable reductions in their southbound rail transportation costs.

Improving Ocean Falls and West Linn

Extensive operating improvements are planned by Crown Willamette Paper Company for the wood mills of the West Linn and Ocean Falls plants and No. 9 paper machine at West Linn is to have a new insulated transite hood. The machine will be down about a week while the hood is being installed.

As a result of the overhauling program, West Linn is to get three new drum barkers, 10 feet in diameter by 30 feet in length, new edgers and trimmers and the conveying equipment that goes with it.

The Ocean Falls wood mill is to be considerably improved. Its new installations will include three new drum barkers, edgers and trimmers and cut-up equipment, together with conveying apparatus.

The improvements at the two mills are to be made at the same time, probably about August, although the work may start a month earlier or a month later.

Wage Cut at Salem Mill

Minimum wages of $2.16 daily for men and $2.20 for women were made effective June 1 at the plant of the Oregon Pulp & Paper Company, the result of an additional wage reduction agreed upon in May because of continuously lower market prices being received for paper. Women's minimum wages held constant due to the state's minimum wage laws but men's wages were cut. Total reductions of about 40% have been made in wages at the plant in the last two years. The management of the mill reported that the reductions were necessary to keep the plant operating. F. W. Leadbetter is president of the company.

Improvements in Prospect at Los Angeles

Nels Teren, vice president in charge of production for the F. W. Leadbetter mills, returned to Portland the fore part of June after spending several weeks at the Los Angeles plant. Plans are under way for some improvements at that plant, Mr. Teren said, and he has been busy working them out. He said the company is not ready as yet to announce what changes are contemplated, but will do so when they have been definitely decided upon he said.

Canada Looks To Britain for Markets

British Columbia pulp and paper manufacturers will join with operators of eastern Canadian mills in endeavoring to secure a larger share of the United Kingdom market for newsprint and woodpulp. This plan, conceived largely as a result of market depression in other countries, is expected to receive considerable impetus at the British Empire Economic Conference to be held next month in Ottawa. At this conference there will be representatives of Great Britain and all the British dominions, and Canadian pulp and paper men intend to make the most of this opportunity for paving the way for increased sale of their product in British countries.

The chief drive for business, however, will be made in the British Isles. This is an important market, the annual requirements approximating 925,000 tons of newsprint. Of this amount only about 575,000 tons is produced in English mills; the remainder is imported. Taking 350,000 tons as the average import requirement, about 125,000 tons of this is usually supplied by European countries, such as Sweden; 105,000 tons comes from Newfoundland, and 120,000 from Canada.

The greatest interest among British paper manufacturers, however, lies in the direction of pulp. Very little pulp is produced in Great Britain, practically all the raw material being imported. Canadian manufacturers of pulp see an opportunity for business extension here, although they have done little about it in the past. Most of the pulp has been supplied in the past by Sweden, but the formation of the Swedish pulp cartel some years ago resulted in the increasing of prices, and it is reported that British buyers are eager to shake off the Swedish domination of their pulp trade.

So far as Canada is concerned, the British Isles pulp market is a virgin field. Last year Britain imported 416,000 tons of dry mechanical pulp, of which only 17,000 tons came from Canada. Dry chemical pulp totaling 500,000 tons were imported during the same period and none of this was supplied by Canada. British buyers have been paying about $25 a ton delivered and while this would not yield much profit there are some operators in Canada who would be willing to accept that figure if in so doing they could keep their mills running.

International Paper and Power Reduced Surplus

International Paper & Power Company reports that consolidated earnings for 1931 after deducting all interest and other charges senior to dividends on the preferred shares of the company and after year-end adjustments, but before deducting depreciation, amounted to $8,557,189. Dividend payments on the preferred shares of the company charged against surplus during the year amounted to $1,632,565, leaving a balance before depreciation of $6,924,624. Depreciation charges amounted to $7,938,950, resulting in a reduction in surplus for the year of $1,014,326.

In his remarks to shareholders, Archibald R. Graustein, president of the company, says:

"Preliminary consolidated earnings figures for the first quarter of 1932 indicate a loss, after interest and depreciation, of about $400,000. Higher earnings of International Hydro-Electric System, occasioned largely by better water conditions, were more than offset by the decline in volume and prices in the business of International Paper Company and its subsidiaries. Volume of business is still receding."

Bondholders Willing to Wait

Holders of the 7% general mortgage sinking fund bonds of the B. C. Pulp & Paper Company, Vancouver, B. C., have approved and ratified the plan of the directors for a postponement of interest until 1934.

Payment of half yearly interest due May 1 last was deferred and in view of the uncertain position of the industry for the immediate future the officials of the company proposed a plan which provided for a deferment of the half-yearly interest due May 1 and November 1, 1932, and November 1, 1933, until November 1, 1934, when the total interest due and the accumulated interest thereon would be paid in one sum.

The directors retained the right to make payments earlier if conditions warranted. The operations of the sinking fund are also to be cancelled as at November 1 for each of the next three years.

The plans of the directors were fully endorsed at a special meeting held in Toronto late in May.

Corner Brook Mill Earns Less in 1931

International Power and Paper Company of Newfoundland, Ltd. (Corner Brook mill), a division of International Paper and Power Company, reports that after all charges including taxes, all interest, depreciation and depletion, amortization, etc., net earnings added to surplus for the year 1931 amounted to $634,630 against $764,641 in 1930.

At the end of 1931 inventories of finished paper were written down from $30 a ton to $25 a ton at the mill. As the company normally carries substantial inventories in order to meet customers' requirements during the closed navigation season, this write-down reduced both net earnings and current assets by nearly $500,000. Newsprint paper prices were $5 per ton lower throughout 1931, but production rose to 175,269 tons in 1931 from 168,051 tons in 1930.

Canadian Hydro-Electric Increases Earnings

Canadian Hydro-Electric Corporation, Ltd., and subsidiary companies, including Gatineau Power Company, report that consolidated net revenue in 1931, after deducting all prior charges, amounted to $2,305,546, equivalent to $18.44 per share on the corporation's 6% first preferred stock, or more than three times dividend requirements. This compares with earnings of $15.40 per share in 1930, and $7.94 per share in 1929.

Comparative consolidated profit and loss statements are as follows:

	Year 1931	Year 1930
Gross revenue, including other income	$9,197,407	$8,513,409
Profit on exchange	114,232	----------
Net before interest and depreciation	7,850,669	7,205,750
Int., amort. of disc., Pref. divs. of subsidiaries	4,951,000	4,617,043
Depreciation and Amort. of Storage works	594,123	663,776
Balance available for dividends of Canadian Hydro-Electric Corp., Ltd.	2,305,546	1,924,931

The corporation and its subsidiaries continue free of all indebtedness to banks.

Production of energy was well maintained during the year, consolidated peak load being 650,235 horsepower and the total output, including small amounts of purchased power, being 2,423,055,637 kilowatt hours, compared with a peak load of 605,495 horsepower and an output of 2,534,521,721 kilowatt hours in 1930.

W. Ronald Benson, formerly with the National Paper Products Company's 200-ton kraft paper mill at Port Townsend, Washington, is now in Buffalo, N. Y. He was a former student in chemistry at the University of Washington.

SAMPLE BOOKS

There's room for improvement in standardization of sizes

By W. B. REYNOLDS
General Paper Co., San Francisco

THIS subject for years has engaged the attention of many people in the paper industry because it has been realized that adequate sampling of any merchants' line is a large item of expense, and because, also, there are acknowledged shortcomings in the systems employed by the largest percentage of jobbing organizations.

It was doubtless the plan of the Program Committee in listing this subject for discussion at this meeting to provide for the presentation of the facts or to note progress down to date. Therefore, this brief paper will attempt to outline the efforts to standardize and suggest some of the arguments for and against different sample systems.

In February of this year a booklet was issued under the joint authorship of the American Pulp and Paper Association and the National Paper Trade Association on standardization of sample book sizes. Not all of you may have seen this report. In substance the conclusions are these: that there be a gradual discontinuance of all individual merchants' sample cabinets and sample books, and that there be used instead a composite filing system of all merchants' samples in a standard filing cabinet to be supplied by the printer or any other buyer of paper. As to size it is recommended that 8½ x 11 be the standard as that size would be available through the use of the larger three or four drawer filing cabinet. There are eighteen index segregations suggested, the idea being of course, to file all merchants' samples of any one grade or line under the one index.

There can be no question at all that the present unit system of individual cabinets so widely employed in the Pacific Coast territory, have several admitted disadvantages. In the first place, the cabinets are used for purposes other than for holding the sample units themselves. There are cases on record on the Pacific Coast of cabinets being utilized for tool kits and for card filing systems. There is even an authenticated instance of conversion into a radio cabinet. Secondly, the expense of servicing the cabinets, at least for any good-sized jobber, is really burdensome—particularly in these days when we are exposing many expenses now considered questionable but heretofore passed by as necessary. And even with the most rigid efforts to service regularly there are no end of instances where misplaced or lost units have cost jobbers actual sales through inevitable delays in checking and replacement to keep cabinets completely up-to-date.

I am of the opinion that so far as unit samples go, at least in Pacific Coast territory, that we have made one general mistake—the size is too small for satisfactory service. In many instances, as is the case with watermarked lines, the size used does not afford area enough to show all of the watermark; often none of the watermark at all appears. Again, buyers of printing frequently demand large full size sheets from the jobbers stock, indicating their reluctance to approve any particular stock in any such restricted size as shown by the printed sample unit itself. This same criticism applies of course, with greater force, to cardboard and blotting samples, which for size at present are in the postage stamp class.

At present the great majority of unit samples in size are about 6x9. If this unit system is to be retained it would seem wiser to gradually enlarge the size at least to 8½ x 11—a size which is convenient, not only for office use, but also finds itself properly accommodated in the printing salesman's brief case.

One large jobbing organization has made a long step forward in reducing the expenses connected with the issuance of unit samples. I have the permission of the Zellerbach Paper Company to outline what has been done to date. No mill line is taken on unless the manufacturer agree to supply a satisfactory number of mill sample books in size convenient for the jobber's cabinet. These books are furnished the jobber without cover, the jobber affixing the stencil as his own cover, the inside of which carries the necessary information as to what items of the mill's complete showing are actually stocked for spot sale. You can all readily appreciate that this is a tremendous saving in initial expense as against the widely used plan of the jobber having local printers prepare the entire unit including cover.

However, there is a growing list of merchants who are not all sure that the unit system after all is actually the best for the jobber. There are frequent arguments against it. Therefore, if standardization is necessary as to size, and a larger size is regarded as ad-

A paper presented at the annual meeting of the Pacific States Paper Trade Association.

vantageous, both for the printer and the buyer of printing, some consideration ought properly be given to other possible sample systems—inasmuch as a complete new investment for cabinets and units is clearly indicated if the present cabinet system is to be retained. Consequently, if a new investment faces us it is imperative that none be attempted before other systems and their advantages are first carefully investigated.

There appear to be several appealing arguments in favor of the looseleaf system with its easily removable permanent cover. Just to state these arguments will suffice, tho I would urge any jobber interested in the matter of samples, or sample system to spend some of his time checking us, as, parenthetically, while it is only a guess, it seems a fair statement that the original cost of looseleaf samples put together under one cover is far less than the present so widely used plan of unit samples, printed in the Merchants Association's home city.

Frankly this paper is no brief for precipitating the jobbing industry at this time into the heavy expense of changing to the loose leaf system for samples. But there can be no question at all as to the reduction in cost of maintenance, in the freer use of samples, in the saving of orders lost because of misplaced units, and in the real necessity for larger sized sheets whether they be supplied through the unit system or in a loose leaf binder. All of these points deserve careful consideration when the jobber faces any important additional investment for units or new cabinets.

It is possible that most jobbers in the Pacific Coast territory have written off all but a small portion (and that would be for recent prints of units) of cabinet sample investment, so to scrap such a system at the proper time when profits would seem to justify the purchase of some new system would not mean the wiping out of important capital assets to the detriment of balance sheets.

The loose leaf price list with its permanent cover and change sheets covering only items affected by market advances or declines as these occur appears to be a long step forward, and ultimately will spell an actual reduction in expense. The loose leaf sample book would also appear to be a worthy companion to the loose leaf price book.

Kauffman Visits Northwest

Before leaving for Chicago and Eastern points S. S. Kauffman, president of the Pacific Safety Paper Mills and the Union Lithograph Company, Inc., of Los Angeles, passed through Seattle and other Coast cities. Mr. Kauffman says his company is now using a Coast-made safety paper extensively in his business of manufacturing bank checks and similar items.

New Paper Bag Company in L. A.

The Los Angeles Paper Bag Company, located at 941 East Third Street, Los Angeles, California, started operations on June 1 with the manufacture of shopping bags, plain and decorated, with development plans of manufacturing bags for the grocery and specialty trade. The announcement is made by S. T. Falk, president of the company.

E. C. Bogren, manager of Western Waxed Paper Company, Portland, reports business at about the same level as in this period of 1931.

Levison Looks Over the Pacific

Ben Levison, San Francisco paper mill representative, says that if the worst comes to the worst, the annual convention of the Pacific States Paper Trade Association can be held at his recently completed summer home on the shores of Big Lagoon, overlooking the Pacific Ocean from Marin county, across the bay from San Francisco. Ben says there is plenty of room for a golf course there.

D. L. Maxwell, The Tissue Company, San Francisco, recently spent a few days in the Pacific Northwest and visited his firm's plant at the Camas mill of the Crown Willamette Paper Company. First shipments were made from The Tissue Company's northern plant one year ago May 25. O. J. Leloff is in charge of the northern operations.

Two early June visitors to Otto W. Mielke, San Francisco, general manager of Blake, Moffitt & Towne, were Robert S. Crump of the Standard Paper Company of Richmond, Va., and W. J. Hamlin of the Vortex Cup Company of Chicago.

Cutler Bonestell, president of Bonestell & Co., San Francisco paper jobbers, recently returned from a 30,000 mile trip aboard the new liner "Mariposa" around the Pacific Ocean.

C. W. Smith, president of the American Envelope Co. of West Carrolton, Ohio, was a recent Pacific Coast visitor and in San Francisco spent some time with Ben Levison, his mill representative there.

R. A. McDonald, vice president in charge of sales for Crown Willamette Paper Company, visited Portland early in June on his way home from the East.

Kelly Resigns From Hawley

With the resignation effective June 1 of W. A. Kelly as vice president and general manager of the Hawley Pulp & Paper Company, and from the board of directors, the organization is to continue without anyone occupying his post or assuming his titles. Felix Pagenstecher, president, will keep a close eye on production which will be under the direct supervision of Dan Dupius, superintendent. George W. Houk, vice president, is devoting his attention especially to sales.

Mr. Kelly, who is said to retain a financial interest in the concern, said that he had several propositions under consideration, but that he was not yet ready to make any definite announcement.

Freight Car Loadings Decline

Freight car loadings of paper and paper products in the Pacific Northwest for the third quarter of 1932 are forecast at 1,744 cars, a decline of 165 cars or nearly nine per cent from the actual loadings for the third quarter of 1931.

The compilation of figures as submitted for summary by C. B. Richards, traffic manager of Hawley Pulp & Paper Company, Oregon City, at the regular meeting of the Pacific Northwest Advisory Board at the Winthrop Hotel, Tacoma, June 10, showed the following monthly totals: Actual loadings in 1931, July 659 cars, August 667 cars, September 583 cars. Prospective loadings in 1932, July 598 cars, August 605 cars, September 541 cars.

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of those who sell paper in the western states

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Shorno in Charge at Portland

Portland offices of Blake, Moffitt & Towne, wholesale paper dealers, have undergone some minor remodelling and repairing recently. The new general manager, Clinton L. Shorno, has replaced all the ground glass windows between the various private and general offices with clear glass. Some new flooring has been put in.

C. L. SHORNO
Manager
Portland Division
Blake, Moffitt & Towne

Mr. Shorno looks for a good deal of business to come to the paper trade from the several sizable conventions and other gatherings on the Pacific Coast this year, including the Rotary convention at Seattle, the American Legion convention at Portland and the Olympic meet at Los Angeles.

Zellerbach's Personnel Changes

Recent personnel changes announced by H. L. Zellerbach, president of the Zellerbach Paper Company, include the appointment of Mason B. Olmsted, vice-president of the company, as manager of the firm's southern California divisions, with headquarters in Los Angeles, and the election of Victor E. Hecht to a vice-presidency in the company and his appointment to the administrative headquarters staff at San Francisco in charge of printing paper sales promotion.

Mr. Olmsted, a son of George Olmsted, vice-president of the S. D. Warren Paper Company of Maine, came to the Zellerbach Paper Company a few years ago after serving as sales manager in an eastern paper mill. He was named assistant to Harold Zellerbach, who, at that time, was vice-president in charge of sales. When Mr. Zellerbach was named president of the company, Mr. Olmsted was elected vice-president in charge of sales. Later he was transferred to the Los Angeles trading area and now is in full charge of the firm's operations there.

Mr. Hecht has been with the Zellerbach Paper Company for more than 20 years, all the time being spent in southern California. He formerly was manager of the southern California divisions of the firm. The post into which Mr. Hecht is being transferred is head of a new department, as the printing paper branch of the work has had no sales promotion program. T. J. Finnerty, of the headquarters administrative staff, has been manager of the wrapping paper sales promotion department.

Colton Representing Purchasing Agents in East

Louis A. Colton, vice president and director of purchases of the Zellerbach Paper Company, San Francisco, left June 1 for a four weeks' trip through the east. Mr. Colton is president of the Northern California Association of Purchasing Agents and will represent that body at the 1932 convention of the National Association of Purchasing Agents at Detroit during the week beginning June 6. Following the Detroit meeting, Mr. Colton will go on to New York and other cities on the eastern seaboard, calling on some of the mills en route.

Sheldon Representing the Northwest Paper Company

C. P. Sheldon, San Francisco, recently named Pacific Coast sales manager for The Northwest Paper Company, a Weyerhaeuser paper manufacturing company with mills at Cloquet and Brainerd, Minnesota, says he likes his new post fine and praises the splendid spirit found among West Coast paper jobbers.

"Pacific Coast jobbers," he says, "are a high type of men and a splendid group with which to work. I certainly like it on the Coast and am glad I am here permanently."

Before joining the Northwest company three and a half years ago, Mr. Sheldon was in the paper jobbing business, serving with Bradner, Smith & Company, and the Whitaker Paper Company, two of Chicago's leading paper jobbers. As a result, he has both mill and jobbing experience in the paper business. Mr. Sheldon is no stranger to the Coast, as he traveled out here for the Northwest company before being named permanently to his present post. He now travels only in the Western states.

Mr. Sheldon has a diversified line of papers and one of his duties right now is the promotion of "Klo-Kay" English Finish book paper. A handsome advertising piece has been made up for this paper and is being distributed in the West.

The distributors along the Pacific Coast for the Northwest's principal tonnage lines are the Carpenter Paper Company of California, Ltd., Los Angeles; Carter, Rice & Company, San Francisco, Portland and Seattle; Carpenter Paper Company of Salt Lake City; Bonestell & Company, San Francisco; Butler Paper Company, Denver; McClintock-Trunkey Company, Spokane, and the Pacific Coast Paper Company, San Francisco.

C. H. Beckwith, San Francisco, Carter, Rice & Co., was a Pacific Northwest visitor late in May.

MAINTAINING UNIFORM COOKING ACID CONDITIONS

By J. P. V. FAGAN, Superintendent
Puget Sound Pulp & Timber Company

FROM my observations here on the West Coast the greatest problem, from an operating standpoint, seems to be to maintain a uniform cooking acid condition.

Everybody recognizes the acid plant as the heart of the proposition but it seems that we all want to allocate heart functions to apparatus other than the heart.

Let us look into the conditions under which we all have to operate.

First, we have the everpresent wood problem; the types are few but, consider the enormous range of moisture contents, with the larger percentage of operations struggling under conditions of 50% or more of water content.

Then we have the sapwood condition as in slabs, and the differences in woods grown under low and high land conditions, and we also must keep in mind over-ripe wood.

These are all commonplace conditions that appear in all West Coast plants. As to the seasonal variations, these are not so great in range nor so troublesome as our friends East of us have to contend with, for which we can be thankful.

Now the problem is to make high grade uniform pulp out of a year-full of the above variables. In the regular well ordered plant we just have to take what comes and we do the best we can but an analysis seems to reveal the fact that we can do better if we arrange to compensate for these variables.

Ordinarily we make acid of a uniform daily test and send it to the tanks and pray that it will average up to the test we seem to have found the most practicable for our plant. The digesters are filled with whatever chips happen to get into the hopper and whatever acid is ahead in the tanks. If the steam is a little wet and the wood happens to be dryer than usual we are jubilant, but let the reverse happen and grouches appear as if by magic. But just think what you are asking of that cook: You give him a digester full of variables and set an ideal 100% pulp for him to achieve. Lady Luck alone could bring results from such a chaotic mess.

I have tried to unscramble this mess and by pitting one variable against the other to nullify the effects of at least some of them.

Instead of the cook juggling all of these variables and trusting to luck I have allocated the ones capable of control to different members of the crews as part of their daily routine work, and this has solved the problem for the greater part.

It is carried out somwhat in this manner:

The cook has control within limits of the cooking acid free, the helper of the cooking acid temperature and the acid maker worries only about the cooking acid combined.

Practice seems to indicate that the best combined to carry on the West Coast Hemlock woods is 1.15 to 1.20, with a cooking acid free of about 4.00%.

It works out about like this:

The acidmaker takes hourly tests of the tower acid and the reclaimer tank acid; he also takes a Be reading of his towers but he is instructed to pay little attention to this reading. He also records the acid tank levels hourly and tests the gas from the reclaimer tanks that goes back to the acid plant.

His particular guiding figure is the combined in the reclaimer, or first tank, acid. He varies the water input to the towers so to keep this within a limit of .05%. He also carefully watches the volume of acid he is making and keeps this level within a foot all the time.

Now all the while, the cook is keeping account of the free in the reclaimer tank by means of the hourly tests brought up to him and recorded on a daily shift slip for his convenience by the first helper, whose duty it is to keep these figures posted within a half hour of testing time. If he (the cook) sees that the free is dropping within limits of .20% he drops more side relief to the separator; if on the other hand the acid is raising above the set limit he puts more relief back to the reclaimer tank.

Meanwhile the first helper has been keeping close track of the temperature of the reclaimer tank acid, and he regulates the water on the relief coolers to maintain a uniform temperature, which should be within plus or minus 1 °C.

You see, there is nothing complicated about this system of control and it does give a uniform acid condition.

From the above you see there is left to the cook to struggle with, only the difference in moisture content of the wood and its particular physical contents; thus he is free to use his senses of color and smell unhampered.

Now there is another and far more useful aspect of this method that only shows itself when the end of the cook is near, and that is the bleachability. Naturally we all want a high strength pulp with as low bleachability as is consistent with that quality.

If our side relief is properly timed we get the bene-

A paper presented at the Spring Meeting of the Pacific Section of TAPPI, held at Portland, Oregon, May 6 and 7, 1932.

fit of solvents that come off with the relief at about this time, and you will find that volumetrically and gravimetrically your solutions will not check up. You may find a free of 4.00% by volume, but if a careful gravimetric analysis is made you may find as little as 3.50%. The same is true of the combined.

By following this method a ratio of liquid digester relief to raw acid is maintained and consequently the color of the cooking acid is more nearly uniform, and this is a great aid to the cook in color determination for blowing the digester.

If the proper ratio is kept up you can be sure to save from ½ to 2% of bleach consumption, and in addition, you will have no stock that is difficult to bleach white. The sulphur consumption will be uniform and range well under 300 lbs. per ton.

For a maximum strength pulp the bleach consumption will be from 12 to 15%.

The separator losses will vary from 6 to 10 lbs. of sulphur per ton.

The limerock consumption will be around 360 to 370 gross pounds per ton.

Your yield will range from 1,775 to 1,900 lbs. fibre per 1,000 purchase scale feet of logs.

You need never fear of lime troubles in your blowpits and you will find that you will have a uniformly easy screening stock with a minimum of screenings.

Port Angeles Operations are Slow

In the pulp and paper mill community of Port Angeles, Washington on the northern shore of the Olympic Peninsula things are rather quite right now. The 175-ton bleached sulphite pulp mill of the Olympic Forest Products Company has been closed for an indefinite period. The 300-ton news print mill of the Washington Pulp & Paper Corporation is running on short time. At that plant, rather than to run on straight short weeks, operations have been condensed, so that production periods are bunched and then layoff periods are extended. The Fibreboard Products Inc. board mill has been operating with some lost time.

Optimistic About Prince Rupert Mill

Howard Cole of Chicago is one of the sponsors of the proposed sulphite pulp mill at Prince Rupert, according to F. L. Buckley, of Vancouver, who is organizing the company. Mr. Cole was not further identified.

"Owing to the general depression we are finding it difficult to get under way, but the outlook for the mill is anything but discouraging," said Mr. Buckley. "I expect to get details of financing cleared up within a few days and then we will proceed."

A tentative site on Seal Cove has already been chosen and a 200-ton mill is contemplated.

Several other financiers are expected on the coast shortly from Chicago and other cities of the Middle West, and when they arrive it is hoped to expedite plans.

"The style of mill we propose to establish costs more at the beginning," said Mr. Buckley, "but it turns out a higher grade product."

Westbrook Steele Visits Coast

Westbrook Steele, executive secretary of the Institute of Paper Chemistry, a research organization maintained by the paper industry at large at Appleton, Wisconsin, was a visitor on the Pacific Coast in the first part of June. He held conferences with a number of West Coast mill executives.

Japan's Paper Industry—April, 1932

	Production (lbs.)	Sales (lbs.)
Printing paper (high grade)	11,108,793	11,240,255
Printing paper	9,278,654	9,293,311
Drawing paper	2,933,786	3,053,949
Simili paper	8,015,872	8,177,014
Art paper	892,835	1,091,072
News paper	45,812,539	46,791,704
Sulphite paper	5,169,562	5,096,280
Colored paper	1,560,625	1,485,365
Wrapping paper	13,566,783	12,712,365
Japanese paper	1,420,344	1,671,822
Board paper	6,550,182	4,436,058
Sundries	3,160,198	3,916,059
Total, all grades	109,470,173	108,965,254

Japan's Pulp Imports—March, 1932

Japan imported chemical pulp during March as follows (amount stated in lbs.): Canada, 14,249,467; U. S. A., 3,536,667; Norway, 6,945,067; Sweden, 3,347,600; Germany, 1,266,400; France, 72,267; Switzerland, 248,133; Holland, 90,666; Other Europe, 2,018,133, and total 31,774,400.

Fir Tex Shows Deficit

Fir Tex Insulating Board Company, St. Helens, Oregon, closed 1931 with a deficit of $389,489 as against a deficit of $90,081 at the end of 1930, according to the financial statement submitted at the stockholders' meeting May 10. The mill operated only 57 days in 1931. This year it ran at capacity during March and was scheduled to operate at full-steam during June.

The comparative balance sheets for 1930 and 1931 show the following figures for the two year ends; cents being omitted:

Condensed Balance Sheet
For Years Ending December 31, 1930 and 1931

ASSETS

Current:	1930	1931
Cash	$ 15,566	$ 3,033
Accounts Receivable	6,416	7,298
Total current (including inventories and receivables)	273,558	172,552
Total fixed assets (plant, etc.)	1,824,374	1,753,321
Patents, formulas, etc.	153,693	154,652
Deferred charges	12,491	93,887
Total assets	$2,264,116	$2,174,412

LIABILITIES

Current:		
Notes payable	$ 199,079	$ 197,951
Accounts payable	129,227	31,302
Accrued taxes, interest	1,344	24,724
Total current	$329,650	$253,977
Net worth	$1,934,465	$1,713,935
Total Liabilities	$2,264,116	$2,174,412

The $500,000 first mortgage bond issue was authorized last year, $257,000 of which was pledged to secure notes payable. The statement indicated that about 4%, or $71,053, was written off for depreciation.

Charles E. Dant is chairman of the board; Hamlin F. McCormick, president. At the May 10 meeting E. S. Collins and A. M. Mears, both of Portland, were elected directors to succeed A. J. Lewthwaite, deceased, and John S. Baker of Tacoma.

EQUIPMENT + SERVICES + SUPPLIES

announcements of the auxiliary industries

New Dry Size Announced

Production of a new dry wood rosin size, which is expected to mark a definite step forward in paper sizings, is announced by Paper Makers Chemical Corporation, Kalamazoo, Michigan.

While dry rosin sizes have been on the market for some time, the new type, the trade name of which is "Superior Dry Wood Rosin Size", possesses properties which give it the highest sizing efficiency yet achieved, it is stated by P. M. C. authorities.

The new size is the result of several years of research in the corporation's laboratories and has been in trial production for over a year in a semi-commercial pilot plant.

A special modern plant for production of the size has been designed and constructed at Savannah, Ga.

The characteristics of the new product as described in the announcement are as follows:

1. It is a dry, porous, free-flowing powder.
2. It is free from uncombined alkali.
3. It is quickly and completely soluble, even in cold water.
4. It can be added directly to the beaters without fear of rosin spots.
5. The cost of emulsification is eliminated.
6. Transportation costs are lower per unit of sizing value.
7. The disposal of containers is simplified because, being packed in paper bags, the containers can be added to the furnish.
8. Greater sizing efficiency is assured.

Downingtown Elects Officers

At a director's meeting held in the office of the Downingtown Mfg. Company May 25, 1932, the following officers were elected: Albert H. Standley, president; Charles L. Ellis, vice president and manager of sales; Ellis Y. Brown, Jr., vice president and secretary-treasurer; Jacob Edge, vice president and assistant sales manager.

The directors of the company are the above officers and Thos. W. Downing and I. P. Tutton.

Sales Manager for Norma-Hoffmann

H. J. Ritter, assistant secretary of Norma-Hoffmann Bearings Corporation, Stamford, Connecticut, has also been made sales manager of the organization. To his new duties he brings the experience of years as sales engineer and, later, as manager of the New York sales office, for the corporation.

Duncan Visits Kalamazoo

Alec C. Duncan, manager of the Paper Makers Chemical Company at Portland, is on a visit of a month or six weeks to the headquarters of his firm at Kalamazoo, Michigan. John V. B. Cox, plant superintendent, is in charge in his absence.

Westinghouse President Visits Coast

"Business is on the mend." That in brief was the thought expressed by F. A. Merrick, president of the Westinghouse Electric & Manufacturing Company, at an informal luncheon given in his honor in Seattle on May 31 by W. D. McDonald, Seattle district manager for Westinghouse. The luncheon was attended by a representative group of Seattle business men. The Westinghouse company has played an important part in equipping and modernizing pulp and paper mills on the Pacific Coast in recent years.

Beloit Representative Visits Coast

George A. Macklem, vice president in charge of sales of the Beloit Iron Works, Beloit, Wisconsin, was on the coast early in June. He is reported to have visited the mill at Ocean Falls as well as mills in the vicinity of Portland.

Charles Griffith Stricken

Charles R. Griffith, president of Griffith Rubber Mills, Portland, Oregon, died in his office of heart disease on May 21. He had been ill for several months.

Patent on Carbon Brick Digester Linings

U. S. Patent No. 1,860,477, covering broad claims on the application of carbon brick linings to chemical pulp digesters has been granted as of May 31, 1932, to Carl F. Richter, and assigned to the Stebbins Engineering and Manufacturing Company.

It is understood that the Canadian patent covering similar claims will issue on June 14th, 1932.

And Here's Something to Think About

"I found some interesting reading in your May issue in which you present arguments 'Answering the Opposition' on the protective tariff question,' writes a Wisconsin engineer who has been identified with the industry for more than a quarter century.

"It is really surprising what silly arguments otherwise sound business men can and do trump up when it comes to a point of protecting what they seem to think their own interests.

"At the rate things are going within a year most of the pulp mills of the country will be closed down whether there is a paper mill in conjunction or not because pulp is being offered from foreign mills for less than any of them can manufacture it and they can't compete with converting mills. Then there will be more unemployment and distress than ever. I can't see what benefit cheap pulp will be to the country in general."

Investigate Timber Deal

Public enquiry into the Graham Island timber deal, whereby the late Liberal government in British Columbia sold a tract of timber to the Powell River Company, sole tenderer, at a price asserted to be much below receipts from former sales of equivalent size, is being sought by the Victoria Conservative Association.

What Are *You* Doing to Secure Even Drying Across Your Sheet?

THIS

OR

THIS

Are you trying to offset the difference in drying between the front and back of your machine by loading the presses unevenly or by forming the sheet with a lighter caliper on the wet edge? These methods decrease the quality of the product and increase felt costs.

Or are you taking advantage of the benefits of the Ross-Grewin System that circulates air through machine pockets by means of diminutive high velocity jets? This method not only insures even drying across the sheet, but also increases drying capacity and life of felts.

Some method must be employed to overcome the problem of uneven drying. The Ross-Grewin System combines proven advantages and economies that recommend it wherever greater drying efficiency is required.

Illustrated bulletin sent on request.

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•●•

Accident Injury Rates in the Pulp and Paper Industry

New low marks for the frequency and severity of accidental injuries were established by the pulp and paper industry in 1931. Lost-time injuries, in proportion to hours worked, decreased 14% from 1930, while days lost per 1,000 man hours worked declined 4%. In comparison to 1929 the drop in frequency now amounts to 28% and in severity to 11%. These results represent the experience of 140 mills of all types that have reported in each of the last three years; their records furnish the most reliable year-to-year comparisons.

The number of fatalities in the paper and pulp industry during 1931 rose slightly in comparison with 1930 but is below 1929. In all other respects, 1931 was the best three-year period.

These data are made available by a summary issued by the National Safety Council, Inc., in pamphlet form. The summary is replete with tables that break down the safety experience of a large number of mills into many helpful categories that permit intelligent study on the part of the safety engineer in the pulp and paper mill. Studies are made by departments, by different types of mills, and where possible, by large, medium, and small sized mills.

Some interesting points are made, among them, the fact that news print mills in general have the worst safety records in the industry. Further, the fact that, taken as an industry, the smaller mills do not make consistently worse records than the large ones, or vice versa.

In searching for an interpretation for the consistent improvement in the accident record for the industry at large for the three-year period under observation a number of reasons may be ascribed. These follow, but are not to be ranked in importance in their given order. First, the study covers the year which definitely marked the end of the boom in business, followed by two years of depression. As business got tighter, jobs got scarcer, and the individual workman became more cautious, more willing to abide by rules and regulations to maintain the security of his job. Second, as orders fell off management was given less stress on production, altho more on sales, and was able to devote a little more time to internal mill affairs. Third, as the depression increased, the burdens of management became greater, increasing irritability, and making managers and department heads less willing to tolerate half-obedience. Fourth, scientific attack on the subject of safe mill practice has effected an accumulation of knowledge on the subject, facilitated exchange of experience, cleaned up hazards, and schooled management and labor both in observance of safe practice as a matter of routine.

PULP AND PAPER MILLS IN THE STATE OF WASHINGTON

Statement of Accident Experience—April, 1932

Company—	Hours Worked	Total Accidents	Frequency Rate	Days Lost	Severity Rate	Standing
Fibreboard Products Inc., Sumner	21,006	0	0	0	0	1
Everett Pulp & Paper Co., Everett	70,408	1	14.2	16	.227	2
Washington Pulp & Paper Corp., Port Angeles	60,239	1	16.6	59	.979	3
Grays Harbor Pulp & Paper Co., Hoquiam	52,153	1	19.2	19	.364	4
Crown Willamette Paper Co., Camas	205,796	4	19.5	62	.301	5
Columbia River Paper Mills, Vancouver	35,453	1	28.2	6	.169	6
Rainier Pulp & Paper Co., Shelton	54,806	2	36.5	24	.438	7
Longview Fibre Co., Longview	96,225	4	41.6	42	.436	8
Pacific Straw Paper & Board Co., Longview	21,692	1	46.1	28	1.291	9
Inland Empire Paper Co., Millwood	38,239	2	52.3	22	.575	10
National Paper Products Co., Port Townsend	63,978	4	62.5	84	1.313	11
Puget Sound Pulp & Timber Co., Everett	41,780	6	143.6	57	1.364	12
Puget Sound Pulp & Timber Co., Bellingham	26,592	4	150.4	40	1.504	13
Weyerhaeuser Timber Co., Longview	44,891	7	155.9	152	3.386	14

The following mills did not report—Fibreboard Products Inc., Port Angeles; Pacific Coast Paper Mills, Bellingham.
The following mills were not in operation: Everett Pulp & Paper Co. (West Tacoma Plant); Tumwater Paper Mills; St. Regis Kraft Co.; Puget Sound Pulp & Timber Co., Anacortes, and Shaffer Box Co.

THERE'S A JORDAN DRIVE *THAT NEEDS* THIS THOR

OR MAYBE it's one of your beaters, a chipper, or a pump or cone-pulley —

Whatever the fast, severe duty may be that requires new belting now, or is in the habit of chewing up belts too rapidly —

Goodyear THOR Belt, seamless*, is built to make a record for better service, longer life, and lower belt cost on that job. Note THOR'S special construction:

No center seam to open under flexing strains

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Body of heavy silver duck, strong at the fasteners, and cushioned and buttressed in toughest Goodyear Rubber.

THOR Belt, seamless*, is accurately specified to your particular mill and drive conditions by the G.T.M. — Goodyear Technical Man. So are other Goodyear Mechanical Rubber Goods for paper mill service — like Goodyear Soft-Nozzle Sanitary Hose. And also —

Goodyear's latest tested development for the paper industry: GOODYEAR RUBBER ROLLERS FOR PAPER MILL USE.

The G.T.M. may be able to save you money on belts, hose, and rubber rollers. Get in touch with him through Goodyear, Akron, Ohio, or Los Angeles, California, or your nearest Goodyear Mechanical Rubber Goods Distributor.

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Paper and Pulp Review—First Quarter 1932

At the end of the first quarter of 1932 the trend of paper production in the United States showed a moderate upward movement and according to identical mill reports to the Statistical Department of the American Paper and Pulp Association, the total production for the three months was 7% below that of the corresponding period in 1931.

The trend of total pulp production was moderately downward and the first quarter total production was 5% below the level of the same period last year. Imports of the major grades of pulp increased substantially, offsetting the decline in domestic production. Our imports from Canada did not show any increase but the imports from Scandinavian countries increased materially over 1931 and in the case of Bleached Sulphite and Kraft, were larger than in 1930.

The inventory position in nearly all the major grades of paper showed improvement over a year ago and the total of all grades was about 6% below the level of March, 1931. Inventories of domestic manufacturers of Bleached Sulphite, Kraft and Soda Pulp were materially below the level of a year ago.

U. S. Pulpwood Cut Lower in 1931

The Bureau of the Census* announces that, according to a preliminary tabulation of data collected at the annual canvass of pulp mills, the total quantity of pulpwood consumed by 120 mills in 1931 was 4,248,680 cords, a decrease of 11.6 per cent as compared with 4,808,080 cords consumed by the same mills in 1930 and of 15.3 per cent as compared with 5,013,986 cords consumed in 1929.

The production of wood pulp by these mills in 1931 amounted to 2,842,615 tons, a decrease of 9.4 per cent as compared with 3,137,076 tons in 1930 and of 12.4 per cent as compared with 3,246,634 tons in 1929. These 120 mills accounted for 66.8 per cent of the total consumption of pulpwood and produced 67.7 per cent of the total output of wood pulp in the United States in 1930, as compared with 65.6 per cent of the pulpwood consumed and 66.7 per cent of the wood pulp produced in 1929.

Assuming their proportionate consumption and production to have been approximately the same in 1931 as in 1930, an aggregate consumption of about 6,360,000 cords of pulpwood and an aggregate production of 4,199,000 tons of wood pulp during that year are indicated. The corresponding totals for 1930 were 7,195,524 cords of pulpwood and 4,630,308 tons of wood pulp, and for 1929, 7,645,011 cords and 4,862,885 tons, respectively.

The following statement compares the consumption of pulpwood and the production of wood pulp by 120 identical mills in 1931, 1930, and 1929. In this statement, which covers about 60 per cent of the total number of active mills, twenty-one states are represented. As soon as returns are received for the remaining mills, a report giving complete figures will be issued.

Pulpwood Consumed and Wood Pulp Produced by 120 Identical Mills: 1931, 1930 and 1929

	1931	1930	1929
Cords of pulpwood consumed	4,248,680	4,808,080	5,013,986
Tons of wood pulp produced	2,842,615	3,137,076	3,246,634

*Compiled by the Bureau of the Census, Department of Commerce, in cooperation with the Forest Service, Department of Agriculture.

COMPARATIVE REPORT OF OPERATIONS BY IDENTICAL MILLS FOR THE MONTHS OF JANUARY, FEBRUARY AND MARCH, 1932, AND PAPER REVIEW FOR 3 MONTHS IN 1932 AND 1931.

Grade—		Production	Shipments	Stocks end of Month
Newsprint	March, 1932	100,034	94,282	38,677
	February, 1932	87,157	86,638	32,925
	January, 1932	94,247	94,550	32,406
Book: (Uncoated)	March, 1932	71,323	71,260	39,512
	February, 1932	65,191	68,698	39,449
	January, 1932	64,773	66,233	42,956
Paperboard	March, 1932	155,160	153,253	58,074
	February, 1932	144,950	145,936	56,167
	January, 1932	138,814	140,570	57,153
Wrapping	March, 1932	39,774	41,238	40,368
	February, 1932	38,447	39,935	41,852
	January, 1932	40,096	40,641	43,340
Bag	March, 1932	12,468	12,570	5,879
	February, 1932	12,393	12,476	5,981
	January, 1932	11,540	11,429	6,064
Writing:	March, 1932	26,582	26,059	44,821
(Cover, specialties)	February, 1932	25,246	25,429	44,230
	January, 1932	25,701	26,676	44,413
Tissue	March, 1932	6,831	7,081	7,554
	February, 1932	6,959	6,663	7,804
	January, 1932	7,920	7,426	7,508
Hanging	March, 1932	1,278	1,314	3,604
	February, 1932	1,915	1,710	3,640
	January, 1932	1,996	2,342	3,435
Building	March, 1932	5,070	5,043	3,112
	February, 1932	4,091	4,033	3,085
	January, 1932	3,314	3,859	3,027
Other Grades	March, 1932	18,096	16,666	16,606
	February, 1932	14,928	15,966	15,176
	January, 1932	14,417	15,546	16,214
Total, All Grades	March, 1932	436,616	428,786	258,207
	February, 1932	401,277	407,484	250,309
	January, 1932	402,818	409,272	256,516
Total, All Grades	3 Months 1932	1,240,711	1,245,542	258,207
Total, All Grades	3 Months 1931	1,336,626	1,333,873	273,999

COMPARATIVE REPORT OF OPERATIONS BY IDENTICAL MILLS FOR THE MONTHS OF JANUARY, FEBRUARY AND MARCH, 1932, AND PULP REVIEW FOR 3 MONTHS IN 1932 AND 1931.

Grade—		Production	Used	Shipped	Stocks End of Month
Groundwood	Mar., 1932	74,143	70,651	1,488	60,388
	Feb., 1932	66,362	64,543	1,373	58,384
	Jan., 1932	73,563	71,275	747	57,938
News Grade Sulphite	Mar., 1932	28,878	28,664	499	6,008
	Feb., 1932	26,220	26,206	438	6,293
	Jan., 1932	26,959	26,815	409	6,717
Bleached Sulphite	Mar., 1932	21,607	20,357	1,528	2,542
	Feb., 1932	19,741	17,785	1,717	2,820
	Jan., 1932	18,101	16,554	2,138	2,581
Easy Bleaching	Mar., 1932	1,664	1,527	246	1,312
Sulphite	Feb., 1932	1,986	1,937	250	1,421
	Jan., 1932	2,537	2,108	301	1,622
Mitscherlich Sulphite	Mar., 1932	5,679	3,222	2,229	1,834
	Feb., 1932	4,556	3,064	1,932	1,606
	Jan., 1932	4,481	2,137	2,576	2,046
Sulphite:	Mar., 1932	57,828	53,770	4,502	11,696
Total All Grades	Feb., 1932	52,503	48,992	4,337	12,140
	Jan., 1932	52,078	47,614	5,424	12,966
Kraft	Mar., 1932	26,427	19,806	5,495	3,928
	Feb., 1932	25,571	20,304	5,379	2,802
	Jan., 1932	24,648	20,182	5,003	2,914
Soda	Mar., 1932	15,716	13,419	2,284	2,481
	Feb., 1932	15,499	12,642	2,776	2,468
	Jan., 1932	15,584	12,919	2,896	2,387
Other Grades	Mar., 1932	386	314	48	340
	Feb., 1932	565	400	46	316
	Jan., 1932	498	441	36	197
Total, All Grades	Mar., 1932	174,500	157,960	13,817	78,822
	Feb., 1932	160,500	146,881	13,911	76,110
	Jan., 1932	166,371	152,431	14,106	76,402
Total, All Grades	3 Months 1932	501,371	457,272	41,834	78,833
Total, All Grades	3 Months 1931	529,769	477,791	52,238	69,689

McBain Returns to Coast

B. T. McBain has returned from a four months trip to the East where he attended the convention of the American Pulp & Paper Association in New York in February. Later he visited pulp and paper mills in seven states—New Jersey, Michigan, Ohio, Illinois, Wisconsin, Minnesota and New York.

Mr. McBain reported that of the 30 mills he visited, two were down entirely, three were running full and 25 were operating 50 to 80% of the time. Twenty of these mills reported better business during the time of Mr. McBain's visit—March in some cases, April in others—than during the same period in 1931. One mill that was running four to five days a week last year was operating full time with plenty of business on hand to run the rest of the year.

Camas Golfers Swinging Clubs Again

Putting paper mill worries aside for the time being, the men of the big specialty paper mill of the Crown Willamette Paper Company at Camas, Washington, swung into their annual mill golf tournament on June 4th. It was too early at the time this was written to learn who would get the cup to put on the mantel, but here are some of those who set their name on the dotted line and agreed to tee off in a try for same:

Lynn Morgan, Wm. Hart, Gil Russell, C. O. Carter, E. H. Post, H. M. Green, P. V. Millard, C. Wagner, E. D. Ochs, C. Foster, Clyde Laver, F. Van Landingham, J. M. Tedford, Art Hannaford, H. Ostenson, Vic Lau, Vic Gault, George Lund, Frank Smalley, Doug. Waddell, Charles Galloway, H. S. Clark, Olin Jessup, George Johnson, Paul Sletton, Gus Ostenson, A. W. Rodgers and Keith McDaniel.

Cal Ohborne, E. J. Hughes, Fred Stevey, J. E. Hanny, E. R. Knauf, H. W. Duvall, Miles Murray, Hugh Kennedy, Frank Drumb, Forrest Williams, G. G. W. Charters, H. Foster, G. A. Sundeleaf, O. T. Defieux, Earl Lambert, Jim Shively, Jim Hyde, H. Karnath, Wm. Benson, Fred Santler, J. Turlington, M. W. Phelps, Clyde Johnson, Carl Johnson, Al Troetscher, John Lowther and M. R. Foster.

Now the Shoe Is on the Other Foot

A report drifts in that the efficient Import Committee of the American Paper Industry has filed notice with the government of suspicion of undervaluation on an extremely low-priced shipment of kraft paper from Finland. It is said to be the first importation of kraft paper from Finland.

No information on the amount of tonnage involved has been received, but perhaps it is reasonable to presume that it in no respect approaches the volume of pulp imports, which reach in the neighborhood of 1,800,000 tons a year.

But therein lies the virtue of diligence. Pulp is simply a poor relation with no guardian angel like the Import Committee. It is a free soul and nobody cares about it except to make sure than the gates are kept wide open for it. Kraft paper has to pay its way in with a 30% tariff. The price of the ticket is supposed to keep out the undesirable customer, but let some poor soul sneak under the tent, as was no doubt the case in this instance, and see how quickly the cry is raised "Hey Rube!"

Of course there may be no connection, but with Finnish exchange depreciated about 40%, and the tariff only 30%, there is at least a little problem for the mathematicians.

Depreciated Currency Booms Finn Pulp Exports

Finnish paper and pulp exports have continued to keep up well notwithstanding the trade barriers raised by several important customer countries. **Conducive to the increased exports has, of course, been the depreciation in the Finnish mark.*** The strike in Sweden has not as yet had any perceptible effect on Finnish wood pulp sales. With the exception of mechanical groundwood, exports of pulp and paper from Finland during the first quarter have been in excess of those during the corresponding three months last year, the heaviest increase having been in shipments of sulphite pulp which have risen by 55 per cent. Exports of sulphate pulp and of paper show the comparatively modest gains of 5%. (Consul John L. Bouchal, Helsingfors.)

*The emphasis is our own.—Editor.

ANNOUNCEMENT . . .

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Japanese Rayon Industry Demands More Pulp

British Columbia manufacturers of pulp have been advised that the rising demand for raw materials to be used in the rayon industry of Japan may develop an important new market in the Far East for west coast pulp.

"Consumption of wood pulp by Japanese artificial silk mills has doubled in recent years and last year the figure stood at more than 32,000 tons," it was stated by a British Columbia source. "The Karafuto Industrial Corporation, with mills on Saghalin Island, has been manufacturing large quantities of pulp for the rayon mills of Japan, but it is reported that the demand exceeds the supply from this source and that orders are likely to be placed on this coast in the near future to make up the deficit. Similar demand may develop in the Oji and Fuji organizations, other large consumers of wood pulp."

Exports of wood pulp from this coast, however, may be affected to some extent by the proposed imposition of increased duties by Japan. It is expected that a measure to increase the specific customs tariffs to meet the increases in the ad valorem duties automatically arising from the yen's exchange decline will be introduced in the Diet soon. Wood pulp comes within this category, the tariff ranging from 22 to 27 yen per hundredweight, and this may be increased between 30 and 40 per cent.

The rayon industry appears to be prospering in Japan and mills engaged in this line have operated at capacity despite the general decline in operation of mills devoted to other products. Rayon output in Japan is expected to reach about 50,000,000 pounds this year.

The growth of the rayon industry in Japan, where so much real silk is manufactured, is accounted for by the fact that Japanese women, noted for their economy, are using rayon instead of silk, and also by the general disorganization of the real silk business. In addition, rayon manufacturers agreed on a technical 25 per cent curtailment of output some time ago, but on the understanding that they could operate full time if the surplus over the volume earmarked for the domestic market could be exported. The result has been capacity operation and the development of a large export trade.

Dress Up the Plant—Make Life Better

The latest development in the Hawley Pulp & Paper Company cleanup campaign at Oregon City is a garden. At the north end of the plant on the main street of the city there has stood year after year a huge and not particularly sightly pulp pile. Sometimes the pulp folded and stacked here has been new, sometimes it has been old, but never has it been attractive—except possibly to a pulp man when water was low and production costs high.

Now the pile has gone along with the wooden fence that hid its lower reaches, and in its place has appeared a garden fronted by an ornamental iron fence. It is really a sort of formal garden — quite the thing, you know — lawn with a centerpiece of rhododendron and azalea and four corners of roses.

George W. Houk, vice president, says that he believes the change from greyish, unattractive column to neat and pleasing garden will have a valuable psychological effect on the plant personnel. He feels that the mill workers will be incited thereby to take more pride in their jobs and in their own appearance and this will result in them doing better work.

With the appointment of

Pacific Coast Supply Company

as our exclusive sales agents for the Pacific Coast and Mr. W. C. Marshall as our service man, we hope to increase our business with the Paper Industry in this territory.

It has been a great pleasure for us to supply Colors to the Paper Industry for over **Sixty Years** and we hope you will call on them to help work out your color problems.

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THE DEPRESSION COLUMN

"might as well get a laugh out of life"

* * *

Of Course It Will Fit a Pulp Mill

It was a hot day; it had been a long drag in to market; business was awful poor, but the farmer was even poorer. However, in spite of this gloomy preamble a discerning man might have caught just a faint gleam of hopefulness in the eye of that sturdy son of the soil as he presented his weight receipt at the cashier's window of the warehouse.

"That was 200 bushels of the nicest wheat I've ever brought in," commented the farmer.

"Yup," agreed the warehouseman curtly. "Now let's see," and he set to figuring, a long column of figures, percentages and fractions, concerning which the farmer could catch out of the corner of his eye such things as "commission", "storage", etc.

Finally. "You owe me exactly $1.15," announced the warehouseman.

"What?"

"You owe me $1.15," confirmed the warehouseman. Then, seeing the cloud of gloom flit across the farmer's face, he hastened to add, "But I tell you what. You don't have to pay me cash. Bring me in a nice fat rooster next time you come to town and I'll call it square."

Three days went by and the farmer came in again. He tossed two fine roosters on the warehouseman's desk.

"Now, now," was the protest. "I don't want to be too hard on you. One rooster is plenty to settle that account for the other day."

"Yes, yes, I know," said the farmer, "but, you see, I've brought in another load of wheat."

* * *

Deadhead Freight

This little yarn may serve to show to what depths pessimism may go.

It had been a very dry year out there on the Dakota plains. The crops were burning up. Life was getting less worth living. Day after day the farmers scanned the skies looking for signs of rain.

Old Jed Flatacres had given up entirely. He refused to become excited when a neighbor pointed to the skies and said, "Cheer up, Jed! Look! There's some rain clouds coming over the horizon now."

"Aw heck," said old Jed, "you can't fool me. Those are just empties coming back from Minnesota."

* * *

Stirring Times, These Days

Despite the scarcity of money these days it seems that most firms and individuals are making an honest attempt to pay their bills. Of course, things are not as easy as they were, and some exigencies must be resorted to. For example, there was the paper mill we heard about that, on the first of each month, put all the bills in the waste basket, stirred them up, and then picked out the first twelve for payment.

A creditor complained and began to press for money.

"Listen," said the paper mill cashier. "I'm trying to be fair with everybody. You get too nasty about it and I won't even put your bill in the basket."

* * *

Free of Duty

"Did you see much poverty in Europe?"

"Yes, indeed. A good deal. In fact, I brought some back with me."

OFFICERS
Pacific Section — TAPPI

CHAIRMAN — Ralph Hansen, Weyerhaeuser Timber Company, Longview.

VICE-CHAIRMAN — Harry Andrews, Powell River Co. Ltd., Powell River.

VICE-CHAIRMAN — James P. V. Fagan, Puget Sound Pulp & Timber Co., Everett.

VICE-CHAIRMAN—Ray Schadt, Hawley Pulp & Paper Co., Oregon City.

SECRETARY-TREASURER — E. G. Drew, J. O. Ross Engineering Corp., 414 Lewis Building, Portland.

"Well, Mr. Hansen," queried the interviewer, "how are plans going for the next meeting of TAPPI? That's to be some time in October, isn't it?"

"To tell the truth," answered Ralph B., technical director of the new pulp mill of the Weyerhaeuser Timber Company at Longview, "this chairmanship business is a bit new to me and I'm just getting my breath caught from the Portland meeting."

"I hear many fine reports about that meeting," prompted the interviewer.

"Yes, I've had some here too. But I don't think we ought to feel the job is done. Now that the work is somewhat caught up at the mill some ideas for the next meeting are beginning to get on to paper. Quite a few have been kind with suggestions for improving our ways and means."

"Of course it wouldn't do to be satisfied."

"No, we should set our goal always ahead. In many conversations I've had I sense a general feeling that TAPPI on the Pacific Coast occupies somewhat an unique position. It provides us, way out here on the Coast, the opportunity to get together in fellowship. We have some problems that are peculiar to our own region and the feeling seems to be that we should concentrate on them."

"Elections come in the Fall, don't they?" asked the interviewer.

"Right. And, what's more, we have a lot of good timber in the West Coast mills. Selecting the officers for the coming year is an important piece of business, and action ought to be preceded by study of the field." Then Chairman Hansen added, "Another thing that this section ought to do."

"Yes?"

"Carry on more work in between meetings. There are many things crying for study, problems pertaining to our own mills. We ought to get a little more action in this field of activity. There's room for everybody to take part."

"You're quite right. Well, I must be running along Mr. Hansen. Anything I can do for you?"

"Yes," said the chairman, turning back to the study of a pile of graphs, "just pass the word along that the Fall meeting carries the slogan 'Bigger and Better' and every man will be expected to do his duty."

"You bet I will. S'long."

"S'long."

Ace Paper Company Founded in San Francisco

The Ace Paper Company is a new San Francisco paper and twine house, just established at 504 Davis St. as the successor of the Baer Paper Company, formerly of 508 Haight St. M. M. Baer and his brother Max Baer, formerly of the Zellerbach Paper Company, own the new Ace company.

News Print Production—April, 1932

The News Print Service Bureau reports production in Canada during April, 1932, amounted to 176,660 tons and shipments to 186,443 tons. The excess of shipments over production was chiefly due to the movement by water of stocks accumulated before the opening of navigation. Production in the United States was 91,235 tons and shipments 94,296 tons, making a total United States and Canadian news print production of 267,895 tons and shipment of 280,739 tons. During April, 22,349 tons of news print were made in Newfoundland and 890 tons in Mexico, so that the total North American production for the month amounted to 291,134 tons.

The Canadian mills produced 80,846 tons less in the first four months of 1932 than in the first four months of 1931, which was a decrease of 11 per cent. The output in the United States was 21,003 tons or 5 per cent less than for the first four months of 1931, in Newfoundland 6,975 tons or 7 per cent less, and in Mexico 922 tons less, making a North American decrease of 109,746 tons or 9 per cent.

Stocks of news print paper at Canadian mills totalled 53,904 tons at the end of April and at United States mills 35,417 tons, giving a combined total of 89,321 tons compared with 102,165 tons on March 31.

NORTH AMERICAN PRODUCTION

	Canada	United States	Newfoundland	Mexico	Total
1932—April	176,660	91,235	22,349	890	291,134
Four Months	666,856	372,649	88,343	4,103	1,131,951
1931—Four Months	747,702	393,652	95,318	5,025	1,241,697
1930—Four Months	832,851	459,747	91,112	6,748	1,390,458
1929—Four Months	840,565	460,719	80,557	6,382	1,388,223
1928—Four Months	764,901	471,062	72,333	5,024	1,313,320
1927—Four Months	654,264	518,447	66,218	4,744	1,243,673
1926—Four Months	581,183	560,846	55,233	4,081	1,201,343
1925—Four Months	492,945	504,643	20,942	4,167	1,022,697

Now! Shoes of Cellophane

Cellophane shoes are now being manufactured by a firm in the Middle West, which is also introducing a cellophane pouch for original package use by manufacturers, and a household roll of cellophane accompanied by a booklet telling how to make belts, hat bands, and other articles to harmonize with cellophane shoes of any color. The new product is described as light weight, in a wide range of colors, and durable. Cellophane cut in strips is twisted around a cotton core, forming a thread. A fabric woven of this thread forms the body of the shoe. Some models are being shown made up with narrow leather trim.—Paper Division, Department of Commerce.

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EUREKA!
EUREKA!

—the love letters of
Anthony to Cleopatra"

Contents of safety deposit box, recently unearthed in the shadow of the pyramids, prove to be the long lost and much sought after love letters of two great famous lovers in history. Further examination shows that paper on which they were written must have been made with Hamilton Felts.

As time goes on and more important discoveries of ancient documents are made, it is very reasonable to suppose that many of them will be found to have been written on paper made with Hamilton Felts.

As you know, Hamilton Felts are of very ancient manufacture. The first one was made extremely early in the Victorian Age, 1858 A. D. which, you will admit, is a long time ago.

During the seventy-five years which have come and gone since then, Shuler & Benninghofen have been gathering the ripened experience which expresses itself in the perfect Hamilton Felt so widely used in the paper making industry today.

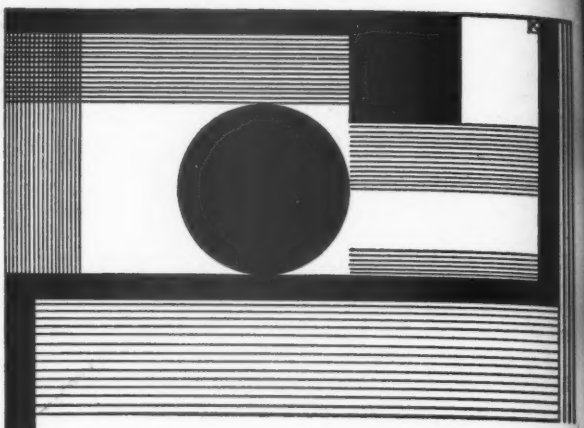
The making of a felt is a matter of experience. There is no standard formula that will serve in all cases. It is experience, which in the course of the year, takes thousands of fleeces, no two of which are alike, and grades, cleans, cards, spins, weaves, and fulls them into the perfect felt which bears the name "Hamilton", a felt which makes better paper and in more than usual quantities.

To try one Hamilton Felt on one of your machines is to standardize on them for all your equipment. Seventy-five years of experience does make a difference.

Shuler & Benninghofen, Hamilton, Ohio

Miami Woolen Mills, *Established 1858*

Hamilton Felts



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